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**Cost Recovery Strategies  
in Makwanpur and Siraha Districts  
Nepal**



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Copies of the questionnaires used in this study are available at the JSI/Kathmandu Office.

**Front Cover Photo:** FCHV Lila Kumari Thapa,  
Bhimphedi VDC, Ward #1 from Makwanpur District  
with two children she successfully treated for pneumonia  
with their satisfied mothers.  
Taken by Dr. Penny Dawson

**Back Cover Photo:** FCHV Meena Devi Chaudhary,  
Bhadhaiya VDC, Ward #1 from Siraha District  
Taken by Nadia Carvalho

**Other Photos:** JSI/Hetauda and JSI/Biratnagar  
Nadia Carvalho, Hira Lal Rajbansh and Fiona McNab

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## Acronyms/Abbreviations

AHW	Auxiliary Health Worker
AIDS	Acute Immunodeficiency Syndrome
ARI	Acute Respiratory Infections
BPC	Blue Plastic Cup
CBAC	Community-Based ARI/CDD
CDD	Control of Diarrheal Disease
CHW	Community Health Workers (FCHVs, MCHWs & VHWs)
CRS	Contraceptives Retail Sales
DDC	District Development Committee
DHO	District Health Office
DPHO	District Public Health Office
EPI	Expanded Program for Immunization
FCHV	Female Community Health Volunteer
HMG	His Majesty's Government
HF	Health Facility (PHC, HP & SHP)
HFI	Health Facility InCharge
HP	Health Post
I/NGO	International Non-Governmental Organization
JSI	John Snow, Incorporated
MCH	Maternal and Child Health
MCHW	Maternal and Child Health Worker
MGM	Mother's Group Meetings
MOH	Ministry of Health
ORS	Oral Rehydration Salts
ORT	Oral Rehydration Therapy
PHCC	Primary Health Care Center
RDL	Royal Drug Limited
SCF (US)	Save the Children (US)
SHP	Sub Health Post
SHPI	Sub Health Post InCharge
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
VDC	Village Development Committee
VDCC/VC	Village Development Committee Chairmen / Vice Chairmen
VHW	Village Health Worker
WHO	World Health Organization

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## Executive Summary

A study of two cost recovery strategies, one in Makwanpur district and the other in Siraha district, was conducted from September 2000 until June 2001. The Makwanpur study was conducted by John Snow, Inc (JSI), and the Siraha study was a collaboration between JSI and Save the Children (SCF US). The United States Agency for International Development (USAID) provides funding to both of these organizations. The objectives of the study included determining the catalyzing factors for the start of each strategy and determining the extent to which cost recovery has been achieved in each district. It was also sought to determine the level of effectiveness of each strategy as well as the opinions of the players involved in each district. These objectives contributed to the primary purpose of making recommendations for implementing similar cost recovery strategies in other districts of Nepal in the future.

Strategies aimed at recovering the cost of pediatric cotrimoxazole were studied in Siraha and Makwanpur districts. Both strategies were undertaken with the objectives of making health a community responsibility, and of managing and maintaining existing health programs through the use of local resources. Female Community Health Volunteers (FCHVs) in both districts sell cotrimoxazole tablets with the final goal of achieving independence from external sources of aid for provision of these commodities. The strategy was started semi-spontaneously and internally in Makwanpur district, instigated by an exchange visit from the Nuwakot district health team to Nibuwatar VDC. At the time of this study the strategy was not yet district-wide, but actively working in 8 VDCs of Makwanpur district, where HFs and CHWs charge for pediatric cotrimoxazole. In Siraha district, the cost recovery strategy was approved by His Majesty's Government (HMG) and initiated in a structured manner with assistance from the International Non-Governmental Organization (INGO) SCF (US). In this district only FCHVs charge for cotrimoxazole, but the program is district-wide.

Cost recovery activities in Makwanpur and Siraha were evaluated through interviews at the District Development Committee (DDC)-level, Village Development Committee (VDC)-level, Health Facility (HF)-level, ward-level and community level. Since FCHVs are major vehicles for the success of cost recovery, a further investigation was conducted in order to determine the factors motivating FCHVs to continue their work and the personal changes experienced by FCHVs. Interviews were conducted in 5 VDCs in Makwanpur district, and 20 VDCs in Siraha district. A total of 88 interviews were conducted in Makwanpur by Auxiliary Health Worker Bishnu Phuyal, and 295 interviews were conducted in Siraha district by a team of sixteen interviewers. All of the interviews were carried out under the supervision of JSI staff in Makwanpur district, and under SCF (US) and JSI staff supervision in Siraha district. The interviews were conducted using standardized questionnaires whose questions had been pre-tested in both districts.

At the time of interviews in Makwanpur district, 8 VDCs had implemented cost recovery strategies in which FCHVs charge caretakers for cotrimoxazole tablets, oral rehydration salts (ORS) packets and blue plastic cups (BPCs). The strategies were initiated after an exchange visit in Baishaakh 2056 (April/May 1999) from the Nuwakot district health team, where FCHVs had been charging for cotrimoxazole as part of a pilot program started by SCF (US). The strategy to recover the cost of cotrimoxazole was first started in Nibuwatar VDC of Makwanpur, and then expanded with involvement from the District Public Health Officer (DPHO) to other VDCs. FCHVs charge caretakers Rs 12 for 20 cotrimoxazole tablets and Rs 18 for 30 cotrimoxazole tablets. They keep a record of all of their sales and attend a monthly meeting at the HF in their VDC during which they submit their report along with the money they obtained from sales. They are then given enough tablets to ensure that they have 100 tablets.

All of the Village Development Committee Chairmen / Vice Chairmen (VDCC/VC) and HF staff interviewed in Makwanpur had positive feelings about the cost recovery strategy, and said that they

experienced no problems in getting caretakers to pay for cotrimoxazole. All twenty-three FCHVs interviewed knew about the cost recovery strategy, and they all knew the correct prices of both categories of cotrimoxazole tablets, BPCs, and ORS packets. Twenty-two of the twenty-three FCHVs interviewed mentioned experiencing no difficulties in getting caretakers to pay for cotrimoxazole. On the day that they were interviewed 78% of FCHVs had more than 20 cotrimoxazole tablets and 83% had at least one ORS packet. A review of the treatment books determined that 57% of FCHVs had treated at least one pneumonia case in the last three months, and that FCHVs treat an average of 1.2 pneumonia cases each month.

It was determined that 91% of community leaders and 74% of mothers interviewed in Makwanpur district knew about the cost recovery strategy. Every community leader and mother interviewed felt that FCHVs did good work and they all felt good about buying cotrimoxazole from them.

The Community-Based ARI/CDD (CBAC) program and cost recovery activities in Siraha district were both started in Baishaakh 2056 (April/May 1999). The cost recovery strategy was initiated through the assistance of SCF (US), with District Health Office (DHO) support and support from the Child Health section of the DPHO from the beginning. FCHVs charge caretakers the same price for cotrimoxazole as in Makwanpur, and replenish their supplies with one of nine authorized drug retailers in the district.

Fifty-six percent (56%) of treatment FCHVs replenish their cotrimoxazole supply by themselves. At the time of the interview 57% of FCHVs had at least 20 tablets, and 91% had the authorized R.D. Prim brand. Twelve percent (12%) of treatment FCHVs did not like to sell cotrimoxazole as community members believe that FCHVs are trying to make money by selling the drug. FCHVs said that community members did not understand why they had to pay for cotrimoxazole when it was free at HFs. Seventy-one percent (71%) of treatment FCHVs who mentioned experiencing problems in the resupply of cotrimoxazole had more than 20 tablets at the time of interviews, while only 33% of treatment FCHVs experiencing problems in the resupply of cotrimoxazole actually had more than 20 tablets. It was determined that as the distance to the drug retailer increased, the percentage of FCHVs having more than 20 cotrimoxazole tablets decreased.

It was determined that 77 of the 88 treatment FCHVs interviewed were actively treating pneumonia (those who had treated at least one pneumonia case in the last three months). The evaluation of treatment books belonging to these FCHVs determined that 71% had treated at least one case of pneumonia. A total of 169 pneumonia cases were treated by these FCHVs, and among these, 166 cases (98%) had been followed-up by the FCHV. It was determined that 55 FCHVs had treated at least one pneumonia case in the last three months, and FCHVs treat an average of one pneumonia case each month. Records showed that a total of 16 cases of severe pneumonia were referred to the nearest HF and 50% of these cases had been followed-up on the third day.

Interviews determined that 47% of VDCC/VC, 55% of community leaders, and 67% of MG members knew that FCHVs sell cotrimoxazole. The majority of those interviewed felt that FCHVs were doing good work.

The majority of HF staff interviewed felt that cost recovery activities in Siraha were running smoothly. However, 25% of HF staff interviewed were aware of certain problems. These included the fact that caretakers did not want to pay for cotrimoxazole. Caretakers are able to get cotrimoxazole free at the HF but are being charged for the same drug with the FCHV. They mentioned that FCHVs also faced difficulties in the resupply of cotrimoxazole.

The FCHV investigation aimed at determining the factors motivating FCHVs to continue their work as well as the personal changes that they had experienced through their work as a volunteer. Serving their community and earning *Dharma* were the main factors influencing FCHVs in Makwanpur district to continue their work. FCHVs in Siraha were motivated by these factors as

well as the ability to increase their own knowledge and skills, and the ability to pass on this knowledge to their community. The main personal changes experienced by FCHVs in both districts included an increase in confidence, an increase in personal knowledge and skills, a greater respect from their community, and an ability to pass on their knowledge.

The main differences in the cost recovery strategies occurring in Makwanpur and Siraha districts are the means with which they were started, and the level at which they are being implemented in each district. In Makwanpur, cost recovery activities were initiated after the ARI program had been well established. As a result community members not only understand and believe that FCHVs are able to treat pneumonia, but also believe in the effectiveness of cotrimoxazole in curing their children. As a result, they may not be as reluctant to pay for a medication that they trust, from an individual whose services and methods they are comfortable with and trusted. HFs and FCHVs in the VDCs in which cost recovery strategies were started all charge for cotrimoxazole. Therefore there is no discrepancy or misunderstanding in these VDCs about having to buy cotrimoxazole with both FCHVs and HFs.

In Siraha district both the CBAC program and cost recovery activities started at the same time. Consequently community understanding of the role of FCHVs and the services that they provide had not yet been established, and when the community was asked to pay for cotrimoxazole they had no basis for believing that it really was an effective drug against pneumonia. In Siraha there is also a disparity about where cotrimoxazole must be purchased; it is free at HFs but FCHVs charge the community for the same medication. As a result, problems arise when people do not understand why they must pay for a medication at one location but can receive this same medication free at another location within the Ministry of Health (MOH) system.

Recommendations for improving and sustaining the cost recovery strategies in Siraha district include increasing FCHV accessibility to cotrimoxazole by either increasing the number of drug retailers in the district or by letting FCHVs replenish their supply at HFs. When FCHVs are asked to charge the community for cotrimoxazole yet it is available to the community free at HFs, the FCHV is placed in an uncomfortable and an awkward position. It is therefore recommended to correct this discrepancy concerning where cotrimoxazole is free and where it must be purchased, by implementing the cost recovery strategy at all HFs in Siraha district.

Results from Siraha district show that there is a need to increase awareness that FCHVs can manage diarrhea, and can diagnose and treat pneumonia among VDCC/VC, community leaders, and MG members. There should also be an increase in knowledge among these groups that FCHVs charge for cotrimoxazole as part of a cost recovery strategy in their district.

Recommendations for both districts include the following:

- Increase awareness among VDCC/VC, community leaders, MG members and mothers that FCHVs charge for cotrimoxazole as part of cost recovery strategies in their districts
- Increase VDCC/VC, community leader, MG member and maternal awareness of the different activities performed by FCHVs, especially their ability to manage diarrhea, diagnose and treat pneumonia, and their involvement in health education and family planning activities
- Emphasize the need for regular MGMs
- Emphasize all the ARI and diarrhea danger signs at MGMs, and stress the importance of third day follow-up with the FCHV when their child is treated for pneumonia
- Emphasize the importance of third day follow-up of pneumonia cases during FCHV training, and especially third day follow-up among cases of "severe pneumonia" that FCHVs have referred to the nearest HF
- Emphasize the need for the continued support of FCHVs from DDC members, VDC members, HF staff, community leaders, community members and mothers

nally, recommendations for implementing a similar cost recovery strategy in other districts were so identified:

- As per findings in Makwanpur district, it is recommended that cost recovery activities be implemented after the ARI program has been well established. This would enable the community to believe in the FCHV's ability to treat pneumonia, and in the effectiveness of cotrimoxazole
- Stress community participation from the beginning
- Implement the strategy district-wide; HF's and FCHV's both charge for cotrimoxazole
- Involve drug retailers in the supply of cotrimoxazole to HF's
- Allow FCHV's to replenish their cotrimoxazole supplies at HF's

In conclusion, Makwanpur and Siraha districts are undergoing attempts to continually make health community responsibility through efforts aimed at managing and maintaining health programs through the use of local resources. Cost recovery activities designed to cover the cost of pediatric cotrimoxazole in Makwanpur and Siraha (and the cost of ORS packets and BPC's in Makwanpur) enable communities to become independent from external aid sources for provision of these commodities. In effect, the current health programs in both districts are being sustained within the community by way of local resources. Cost recovery activities have also resulted in a regular supply of cotrimoxazole tablets being made available at the village level. Finally they have heightened community awareness about ongoing cost recovery strategies in the districts and have increased community belief in FCHV services and the benefits of cotrimoxazole, resulting in enhanced community motivation to pay for the drug when needed. Implementing cost recovery activities requires time, motivation, determination and regular follow up, among other elements. Makwanpur and Siraha districts both show great understanding of these essential requirements, as well as the ability to make cost recovery strategies in their districts a success.

## 1. Introduction

### 1.1 Background

Nepal's national health policy is based on the primary health approach, focusing on health care accessibility and on the quality and full usage of health services. Nepal is composed of three geographic areas: the mountains, the hills and the terai, and it is divided into 75 districts, with each district having either a District Health Office (DHO) or a District Public Health Office (DPHO). Each district is divided into Village Development Committees (VDC) with each having one health facility (HF). The VDCs are further divided into nine wards, each with at least one Female Community Health Volunteer (FCHV).

The Department of Health Services Annual Report 2056/57 (1999/2000) estimated Nepal's total population at 22,892,441, where approximately 3,350,344 children are under the age of 5 years. The 1995/96 Family Health demographic survey estimated the infant mortality rate to be 78.5 per 1000 live births, while the mortality rate for all children under the age of 5 years was estimated to be 118 per 1000 live births (1).

The use of health facility services is limited in Nepal, with fewer than 10% of deliveries done at a health facility, and fewer than 20% of caretakers taking their children to a health facility for treatment of illnesses such as diarrhea or pneumonia (1). Beyond health facilities, FCHVs, Maternal Child Health Workers (MCHWs), and Village Health Workers (VHWs) provide primary health care services. FCHVs are becoming increasingly popular primary health care providers since they are community members who live nearby and are available 24 hours a day.

The FCHV program was started by the Ministry of Health (MOH) of His Majesty's Government (HMG) of Nepal in the 2045/46 fiscal year (1988/89) with the objective of increasing community participation in basic primary health care. The female volunteers are trained to deliver health education and primary health care services to women and children in their community. Their activities include the distribution of vitamin A capsules, oral rehydration solution (ORS) packets, condoms; the resupply of family planning pills to women; and the treatment or referral of acute respiratory infections (ARI) cases in certain program districts. FCHVs also conduct mother's group meetings (MGMs) with topics such as safe motherhood, immunization, family planning, nutrition, sanitation, diarrhea and ARI home therapy, communicable diseases, etc.

FCHVs attend a 15-day initial training which covers ARI, diarrhea, immunization, nutrition, family planning, Acquired Immunodeficiency Syndrome (AIDS), first aid and childcare. At the end of their initial training, FCHVs are presented with a certificate, a badge and a drug kit. They are also given a cloth bag in which to keep their drug kit which includes Paracetamol, Iodine tincture, Gentian Violet, ORS packets, family planning pills and condoms. Once the supplies in this kit are finished, it is the responsibility of the FCHV to replenish her own supplies with assistance from the community and the local health facility or by selling medicines. Family planning pills and condoms are still provided free. Each FCHV is given a signboard to fix onto her home designating her position.



An FCHV displaying her materials

FCHVs in ARI program districts receive special training, and are provided with pediatric cotrimoxazole, a sound timer with which to diagnose pneumonia, and reference materials such as

ARI manual, treatment charts, and ARI classification cards. As part of the Vitamin A program expansion FCHVs are also given ID cards, and all FCHVs from the diarrheal disease control program should be given ORS packets and a blue plastic cup (BPC) with which to prepare ORS correctly.

## 2 Control of Diarrheal Disease (CDD)

The National Diarrheal Disease Control Program was started in 1983 with the goal of reducing mortality and morbidity from diarrhea in children under the age of 5 years. IIMG of Nepal initiated a CDD Reactivation Program in 1993 with the objectives of following up on the original CDD program, providing diarrheal case management training to health service personnel, and improving access to oral rehydration therapy (ORT) at health facilities and in the community.

A 1994 survey to assess health facility staff and FCHVs with respect to knowledge and activities regarding the management of diarrheal diseases, revealed that in order to help community members manage diarrhea at home and recognize danger signs for referral, FCHV knowledge of diarrheal treatment required strengthening in some areas (Table 1) (2,3). The survey concluded that CHWs were in fact the best individuals to disseminate information about diarrheal diseases to the community. As a result a modified approach to the reactivation program was implemented in the central Region (including Makwanpur district). This new approach applied strategies emphasizing programs and case management of specific diseases. It also involved a combination of child health program components including diarrhea, ARI, vitamin A/nutrition and an Expanded Program for Immunization (EPI). Activities stressing the involvement of DDC, VDC and ward leaders were also included, to raise community awareness about the program and the role of FCHVs.

Table 1: Danger signs for the referral of diarrhea and acute respiratory infection cases to the nearest health facility

DIARRHEA	ACUTE RESPIRATORY INFECTIONS
Marked Thirst	Fast Breathing
Many Watery Stools	Chest Indrawing
Eating/Drinking Poorly	Stopped Feeding Well
Fever	Abnormally Sleepy
Repeated Vomiting	Fever or Low Body Temperature (infants 0-2 months)
Blood in Stool	Severe Malnutrition

### 1.3 Acute Respiratory Infections (ARI)

Acute respiratory infections (ARI) are the leading cause of morbidity and mortality in children under the age of 5 in Nepal. The majority of deaths in children under the age of 5 years suffering from ARI are caused by pneumonia (4). It is estimated that between 25,000 to 30,000 children die annually from pneumonia in Nepal (5). The National Program for the Control of ARI was established in 1987 in order to reduce morbidity and mortality from pneumonia among children under the age of 5 years. This included training health facility staff and providing cotrimoxazole tablets to fixed facilities.

In 1994/95 an ARI Strengthening Program was initiated using a "treatment" model (in Chitwan and Makwanpur) and a "referral" model (in Morang and Sunsari). According to World Health Organization (WHO) guidelines, the diagnosis of pneumonia is made with the presence of either of 2 principal signs: fast breathing and chest indrawing. FCHVs and VHVs in "treatment" districts were trained to diagnose pneumonia using a sound timer to count respiratory rate, to treat pneumonia using pediatric cotrimoxazole tablets if the child had "pneumonia only", and to refer the

child to the nearest health facility if the child had any danger signs of "severe pneumonia" (Table 1,2). FCHVs and VHVs in the "referral" districts were only trained to diagnose pneumonia (using a timer and by observation), and were told to refer the child to the nearest health facility if they had pneumonia or severe pneumonia. FCHVs in both treatment and referral districts emphasized information about appropriate ARI home care and the recognition of danger signs to caretakers.

Table 2: Respiratory cutoff rates for the two age groups of children

AGE	RESPIRATORY CUTOFF RATE
0 months to 2 months	60 or more respirations/minute
2 months to 5 years	50 or more respirations/minute

Assessment of this intervention after 1 1/2 years of its implementation, (5) revealed that twice as many children who were at risk of having pneumonia were diagnosed and treated in the "treatment" districts, with no increase in the numbers managed in the "referral" districts. The number of children with severe pneumonia who received treatment in the "treatment" districts also increased. It was determined that mothers had good knowledge of some signs of severe pneumonia, and they found FCHVs to be acceptable care providers because they were accessible and gave good advice. As a result the MOH and its partners decided to cautiously expand the "treatment" model in other districts in a phased manner.



FCHV Kanchhi Maya Thing counting a child's respiratory rate with her sound timer. Makwanpur district, Nibuwatar VDC, Ward 14

Refresher training was provided for health facility staff and CHWs in Makwanpur in 1997/98. A report in 1998 of FCHV knowledge and activities related to diarrheal disease and ARI in Makwanpur demonstrated that FCHVs played significant roles in improving child health in their communities by their ability to diagnose and treat pneumonia based on certain respiratory rate cutoffs for two age groups (Table 2). In 1998/99 five other districts were added into the ARI program, including Siraha district. In this new Community-Based ARI/CDD (CBAC) program, both HF staff and CHWs were trained in the diagnosis and treatment of pneumonia. The CBAC program was started in Siraha district to support the initiative of the MOH of IIMG, with Save the Children (SCF US) as a partner in that district from the beginning.

### 1.4 Vitamin A

Vitamin A deficiency is a severe public health problem that primarily affects children, and pregnant and lactating women. It is estimated that 20 to 40% of preschool children are sub-clinically vitamin A-deficient (6), and between 1 to 13% of all preschool children are at risk for developing xerophthalmia, a sign of vitamin A deficiency (7). Children who are vitamin A-deficient are more susceptible to morbidity and mortality from common infections such as diarrheal disease and measles.

The World Summit for Children in 1990 gave the goal of eliminating vitamin A deficiency by the year 2000. In response to this goal, IIMG of Nepal launched a National Vitamin A Program

NVAP) in 1992. The program implementation began in 1993 with high-dose vitamin A supplementation of children 6 to 60 months of age twice a year. It also included approaches aimed at improving the availability and consumption of vitamin A-rich foods, in order to reduce vitamin A deficiency and therefore impact child mortality. Supplementation is carried out by FCHVs, who are trained in dosing, record keeping and the importance of vitamin A. It was determined that an adequate vitamin A program could avert approximately 25,000 preschool child deaths each year in Nepal (8) and that the risk of mortality of Nepalese children 6 to 72 months of age can be reduced by approximately 30% when they are dosed with vitamin A (9). The NVAP is currently in 72 of Nepal's 75 districts.



*Dosing a child with a vitamin A capsule*

## 2. Cost Recovery Strategies

The assurance of a constant supply of essential drugs remains a major problem in the delivery of basic health care services in Nepal. Although HMG has maintained a certain level of commitment to resource allocation of drugs and supplies to local health facilities, the supply of essential drugs typically lasts for only up to 6 months each year. As a result health facilities do not often dispense the full course of drugs and health facilities are required to give patients prescription slips so that they can purchase drugs locally. Health workers do not follow the standard dosing treatment schedules, patient load at health facilities is very irregular, and the revenue generated from registration fees is not properly used (10). Various factors such as the inadequate availability of drugs at health facilities, the increasing notion that the government alone cannot provide basic health services to the rural population, and the experience provided through several drug schemes that community involvement is an appropriate strategy for sustaining a health delivery system, were considered (10).

Cost recovery activities have recently been started in Makwanpur and Siraha districts, where FCHVs charge community members for pediatric cotrimoxazole. The strategy in Siraha was initiated in a structured manner when the Child Health section of the DPHO agreed for SCF (US) to replicate the Nuwakot district health model. In Siraha district only FCHVs charge for pediatric cotrimoxazole, and the program is district-wide. In Makwanpur district cost recovery activities were started semi-spontaneously and internally after an exchange visit from the Nuwakot district health team. The strategy is not yet district-wide, but in VDCs where the program has been started, HFIs, VIWs, MCHWs and FCHVs all charge for pediatric cotrimoxazole.

The cost recovery strategies in Makwanpur and Siraha were undertaken with the ultimate goal of making health a responsibility of the community. Monitoring activities of the CDD and ARI programs have shown that community members have access to and are making use of the services, and most importantly, they are benefiting from them. In order for the progress from programs aimed at reducing childhood deaths from diarrheal diseases and ARI to continue, these programs must be sustained within the communities through local resources.

For the purpose of this study, cost recovery is defined as the continued efforts to make health a community responsibility, and efforts aimed at managing and maintaining health programs through the use of local resources. This includes covering the costs of pediatric cotrimoxazole tablets and/or ORS packets at the community level through sales by FCHVs with the final aim of achieving independence from external sources of aid for these commodities.

## 3. Study Objectives

This study's objectives are to study the existing cost-recovery strategies in Makwanpur and in Siraha. An investigation into the experiences and personal changes of FCHVs will also be conducted. This study's overall objective was to assemble recommendations for implementing similar cost recovery strategies in other districts of Nepal in the future.

### 3.1 Cost Recovery Objectives

- a) determine the catalyzing factors for the start of the cost recovery strategies in each district
- b) determine the extent to which the desired cost recovery has been achieved in each district
- c) determine the level of effectiveness of each strategy (the successes and problems)
- d) determine the opinions of district health staff, health facility staff, FCHVs, community leaders and mothers

### 3.2 FCHV Investigation

- a) determine factors in FCHV motivation to continue their work
- b) determine how they have been personally changed by their experience as an FCHV

#### 4. Makwanpur District

Makwanpur district (Annex 1) is located in the central hill region of Nepal, in Narayani Zone. Information from the United Nations Population Fund (UNFPA) in 2055/56 (1998/99) estimated the total population to be 384,677, and the total population under the age of 5 years to be 60,154. The Nepal Census conducted in 1991 determined that 24% of women in Makwanpur district were literate.

Preliminary visits to Makwanpur district were conducted with the objective of understanding the existing cost recovery strategy and interviewing district and health facility staff, FCHVs, community leaders and mothers, for opinions about the current situation. Questions were tested in order to create standard questionnaires for future visits. After the questionnaires were developed, a secondary visit to Makwanpur district was carried out in Maagh 2057 (January 2001) with the purpose of collecting data for the study.

##### 4.1 Interview Process

At the time of this study 8 VDCs in Makwanpur district had started the cost recovery strategy. Among these, the strategy had been actively working for a period of 8 to 10 months in 5 VDCs, which were considered to be mature. Therefore these 5 VDCs: Nibuwatar VDC, Bhainse VDC, Harnamadi VDC, Daman VDC and Palung VDC, were selected for the study.



Sushil Karki and Bishnu Phuyal interviewing a mother from Makwanpur district

In Makwanpur district, the DPHO was interviewed. In addition, the HF InCharge or the HF officiating InCharge and the VDC Chairman or VDC Vice Chairman (VDCC/VC) were also interviewed in each of the 5 selected VDCs. It was decided to randomly select 50% of the 45 wards in the 5 VDCs for our study using MS Excel. Therefore, 23 FCHVs, 23 community leaders, and 23 mothers were interviewed (Table 3) (Annex 3). Senior Child Health Field Officer JSI/Metauda Dev Dhaj Karki was also interviewed.

Table 3: Interviews conducted in Makwanpur district

POSITION	NUMBER
DPHO	1
VDC Chairman/Vice Chairman (VDCC/VC)	5
HF InCharge/Officiating InCharge	5
FCHVs	23
Community Leaders	23
Mothers	23



Interviewing Nibuwatar FCHV Champa Rana (Ward #2) Makwanpur district

The FCHV in each of the randomly selected wards was interviewed, as well as a community leader and a mother from the same ward as the FCHV. If the FCHV was away from her home for more than 5 days, then the FCHV from the next ward in ascending order was chosen for an interview, and a community leader and mother were interviewed from this new ward. The community leaders interviewed included either the Ward Chairman, the Female Ward Member, or any Ward Member available. Among mothers, MG members or mothers with children under the age of 5 years were interviewed.

Interviews in Makwanpur district were conducted by an AHW, Bishnu Phuyal. He began each interview by explaining the study's purpose, and then asked the questions on each of the respective questionnaires. All of the questions were asked in an open-ended manner, and no prompting was given.

##### 4.2 Results of Interviews with DPHO, VDCC/VC and HF staff

Makwanpur district is taking active measures to ensure that its FCHVs have a continual supply of cotrimoxazole and ORS packets with which to treat sick children. At the time of this study 8 VDCs in Makwanpur had implemented cost recovery strategies in which FCHVs charge community members for pediatric cotrimoxazole, ORS packets and BPCs. Commenting on the strategy, Sr. DPHO Jagata Nanda Singh said, "HMG should not be solely responsible for health; people should be responsible for their own health" In this respect people are aware of the importance of cotrimoxazole, and realize that they must be responsible for ensuring that cotrimoxazole is always available. Sr. DPHO Singh went on to say that since the strategy started there has been an increase in public awareness and interest about it. Mr. Singh feels that in order for the program to be sustained, visits with the community on topics such as prevention and preventative health must be increased.



Dev Dhaj Karki, Nadia Carvalho, and Sr. DPHO Jagata Nanda Singh in Makwanpur district

The cost recovery strategy in Makwanpur today was developed as the result of an exchange visit in Baishaakh 2056 (April/May 1999) from the Nuwakot district health team to Nibuwatar VDC. With the purpose of recovering costs, the organization SCF (US) asked FCHVs in Nuwakot district to charge Rs 12 for 20 cotrimoxazole tablets, and Rs 18 for 30 cotrimoxazole tablets. This strategy had started as part of a pilot program using the existing MOH model in 3 VDCs of Nuwakot. The Nuwakot district health team, which included FCHVs, met with Nibuwatar SHIP staff, VDC members, community leaders and FCHVs. The team left the Nibuwatar SHIP with one question: What will happen if donor agencies stop providing you with cotrimoxazole: will you let your children die of pneumonia?



(From left to right) Dev Dhaj Karki, Bishnu Phuyal, Kumar Lamichane, SHIP Ananta Baskota, and Sushil Karki in front of the Nibuwatar SHIP in Makwanpur

The Nibuwatar SHIP Mr. Ananta Baskota was very impressed with the Nuwakot health team and their ideas, and decided to implement similar cost recovery activities in his VDC. He began with discussions with the Nibuwatar FCHVs and then presented a proposal to the VDC.

The cost recovery strategy was started in Mangsir 2056 (November/December 1999), with Rs 10,000 from the Nibuwater VDC. In the fiscal year of 2057/58 (2000/01) the Nibuwater VDC donated Rs 11,000, from which Rs 2,000 was used to start a savings fund with which to buy cotrimoxazole tablets.

Success in Nibuwater VDC prompted the initiation of the same cost recovery strategies in Palung VDC in Baishak 2057 (April/May 2000), followed by Daman VDC in Jesth 2057 (May/June 2000), Bhainse VDC in Srawan 2057 (June/July 2000), and finally Harnamadi VDC in Bhadra 2057 (July/August 2000).

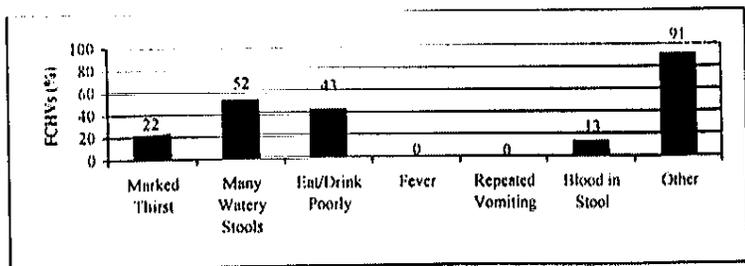
Each FCHV in VDCs where cost recovery activities are occurring is given 100 cotrimoxazole tablets with which to start. She charges Rs 12 for 20 cotrimoxazole tablets and Rs 18 for 30 cotrimoxazole tablets. BPCs and ORS packets are each sold for Rs 6. She sells the cotrimoxazole tablets as required to community members and keeps a report of her sales and the money she receives. Each month at a meeting at the HF, she hands in her report with the money from her sales, and is provided with enough cotrimoxazole to ensure she has 100 tablets. Some VDCs are devising internal strategies for those who cannot afford to pay for cotrimoxazole.

Among the HF Incharges who were interviewed in the selected VDCs from Makwanpur district, all of them felt good about the way in which the cost recovery strategy was working. Cotrimoxazole availability and independence from donor organizations were cited as the primary reasons for this. The HF Incharges said that at first community members were reluctant to pay for cotrimoxazole, but that now there were no problems getting them to pay because they understood about the strategy. The Incharges also felt that the prices were affordable to community members and that the strategy promoted a feeling of self-sufficiency in the community. These sentiments were also shared by the VDCC/VC interviewed.

### 4.3 Results of Interviews with FCHVs

Every FCHV interviewed in Makwanpur district knew the correct doses of cotrimoxazole for the two age groups. They all also knew how to correctly prepare ORS. When asked about the three home rules for treating diarrhea, it was determined that 91% of FCHVs knew all 3 home rules. Every FCHV interviewed knew the first (increase the fluid intake of the child) and the third (watch for danger signs and refer the child to a HF if they have any danger sign) rules. Ninety-one percent (91%) of FCHVs interviewed knew the second rule (continue to feed the child). Graph 1 shows FCHV knowledge of the danger signs to watch for. It was determined that 96% of FCHVs knew at least two of the danger signs. Of importance was that 20 of the 23 FCHVs, or 87% of FCHVs interviewed gave weakness as a danger sign when it is not on the list as a danger sign of diarrhea.

Graph 1: FCHV knowledge of diarrheal danger signs for referral to health facilities



All 23 FCHVs interviewed knew about the cost recovery strategy. They knew the prices at which to sell cotrimoxazole, BPCs and ORS packets, and had all been taught how to sell them. Every FCHV felt that the strategy was good, and said that they had no problems

getting cotrimoxazole. They also said that they did not have any difficulties getting community members to pay for cotrimoxazole either because they convinced them about the strategy or because they gave it on credit and got the money back at the third day follow up visit with the child. Only one FCHV, Devaki Adikhari from ward #6 of Daman VDC, mentioned experiencing difficulty in getting community members to pay for cotrimoxazole. She also felt that there was a reduction in patient numbers since the cost recovery activities started because caretakers did not want to pay for medicines. However she was the only person to make this statement, and a review of her records for previous months was not conducted.

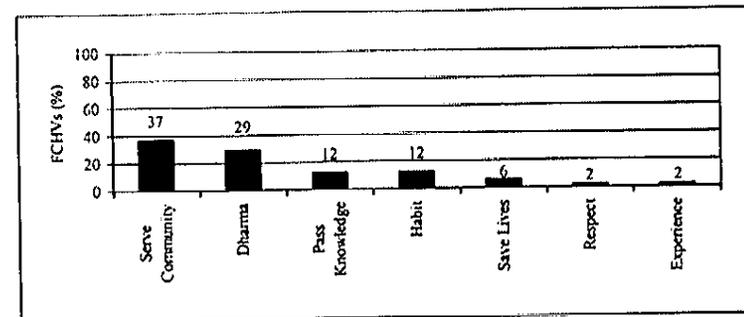
On the day they were interviewed, 83% of the FCHVs had at least ORS packet, and 78% of FCHVs had at least 20 cotrimoxazole tablets with them. Five FCHVs (22%) had no cotrimoxazole, and one of them

83% FCHVs with at least 1 ORS packet
78% FCHVs with at least 20 tablets
57% FCHVs treated at least 1 case
FCHVs treat an average of 1.2 cases/month

reported that she didn't sell because she lived very close to the Bhainse SHP. Interviewers were unable to determine how many FCHVs were actively treating pneumonia. A review of the treatment books for ARI was conducted by the interviewer. Among the 23 FCHVs interviewed in Makwanpur, 13 or 57%, had treated at least one pneumonia case in the last three months. On average, each FCHV treated 1.2 pneumonia cases each month.

Graph 2 shows the reasons that FCHVs gave for continuing their work as FCHVs when they receive no monetary incentive for their services. Among the 23 FCHVs interviewed, 37% said that they work to serve the community and 29% said that their work allowed them to earn *Dharma* (spiritual gain). Twelve percent (12%) of FCHVs gave the reason of passing on their knowledge about health to the community and another 12% said that it was because they had been working as FCHVs for so long that it was now a sort of habit.

Graph 2: FCHV reasons for continuing their work as an FCHV (multiple answer)

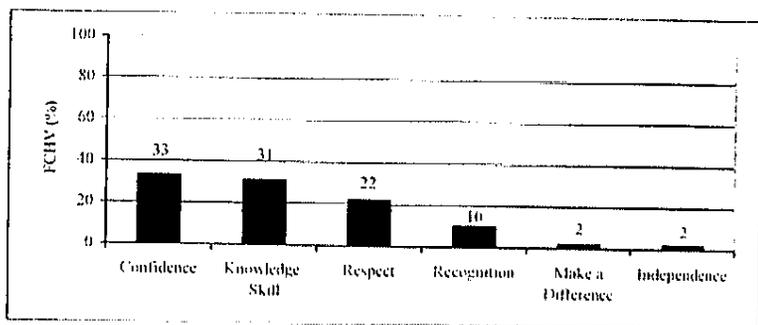


When determining if FCHVs were getting the support they needed to continue their work it was revealed that FCHVs in Nibuwater VDC received a lot of support from VDC, community and ward members. They receive Rs 75 at each monthly meeting, as well as support during vitamin A and oral polio distributions. FCHVs in Bhainse VDC received support from VDC and community leaders, but disclosed that although the VDC had promised them Rs 60 at each monthly meeting, they had not received any money. In Daman and Palung VDCs, FCHVs said they received support during vitamin A and oral polio distributions. FCHVs in Daman and Palung say they have not received the Rs 100 for monthly meetings since 2057 but the Daman FCHVs say that they get

community support, while the Palung FCHVs get support from the VDC. In Hamamadi FCHVs get Rs 50 at each monthly meeting, and every FCHV said that they received support from community members.

FCHVs were finally asked about changes that had taken place in their lives due to their experience as FCHVs. Graph 3 shows that 33% said that they have the confidence to speak and express their thoughts and concerns in front of others, 31% said that they have been able to gain significant knowledge and skills, and 22% said they have gained respect from the community. This demonstrates that FCHVs are becoming respected and recognized in their communities due to the work that they do. FCHVs are able to acquire useful skills and knowledge and are able to pass this information on to other people in their communities in order to improve the health of others. FCHV Kanchhi Maya Thing from Nibuwatar VDC's Ward #4 was elected Female Ward Member to her ward because of her work as an FCHV. This demonstrates that FCHVs are gaining many skills, as well as confidence and recognition within their communities, which is allowing them to become empowered.

Graph 3: The personal changes experienced by FCHVs since becoming an FCHV (multiple answer)



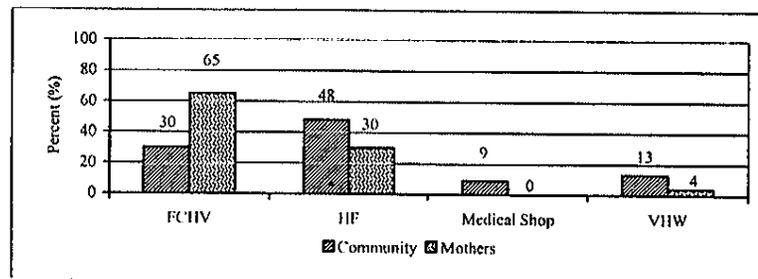
#### 4.4 Results of Interviews with Community Leaders and Mothers

Interviews with community leaders indicated that 91% knew about the cost recovery activities in their VDC. They were all in favor of the strategy, saying that it enabled them to be independent and allowed for medicines to be made available at a cheap price (compared with medical shops) in their villages. Among mothers 74% knew about the cost recovery strategy. Once it was explained to those who were unaware about it, they all felt that it was a good way to ensure constant availability of cotrimoxazole in the villages at a cheap price.

In Makwanpur district, four of the community leaders interviewed were female ward members. When asked where they took their children when they were sick with ARI symptoms or diarrhea, 30% of the community leaders interviewed (this included one of the four female ward members interviewed) and 65% of mothers interviewed said they take their children to the FCHV (Graph 4). It was determined that 48% of community leaders (this included one of the four female ward members interviewed) took their children to the nearest HF while 30% of mothers took their children to the HF. Reasons for taking children to the HF included that the HF was closer than the FCHV, while a few community leaders felt that FCHVs could only treat "simple" illnesses. These results illustrate that FCHVs seem to be more popular with women than with men. It may be that women feel more comfortable taking their children to another woman whom they recognize in their community, than to a HF where their child may be treated by someone that they do not know. If this is the case, it demonstrates that FCHVs are essential in providing health care services to the

local children because they may be trusted more by mothers. On the other hand, the finding that more women than men take their children to an FCHV can also be explained by the distance and time required traveling. It may be that men are able to travel further with their children to a HF, while women are constrained by the time and distance from their homes to a place where health care services are provided.

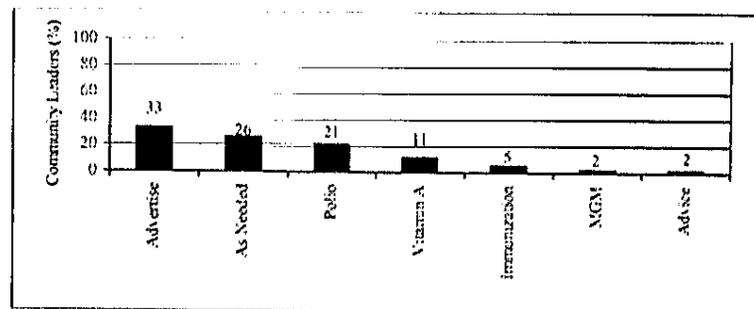
Graph 4: Places where community leaders and mothers take their children when they are sick with ARI or diarrhea (single answer)



Every mother interviewed felt that the FCHV's work was very good. Ninety-six percent (96%) of mothers knew the FCHV nearest to them, and 78% of these mothers knew the FCHV's name. When asked if FCHVs received a salary for their work, only 13% of mothers knew that FCHVs were not paid for their services.

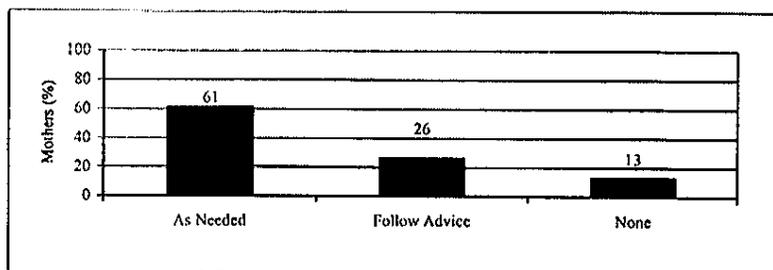
Community leaders were asked the same questions about the FCHV's work in order to determine their feelings towards FCHVs with the purpose of ascertaining the level of support they provide to their FCHV. Every community leader interviewed felt that FCHVs did very good work and 96% believed that FCHVs had the knowledge to treat children with pneumonia. Interviews determined that 96% of community leaders knew the name of the FCHV nearest to them. Every community leader interviewed felt good about having to buy cotrimoxazole and two members said they had already bought the drug while two others had bought BPCs. Eighty-seven percent (87%) of community leaders knew that FCHVs receive no monetary incentives for their work.

Graph 5: The different methods in which community leaders support their FCHV as reported by community leaders (multiple answer)



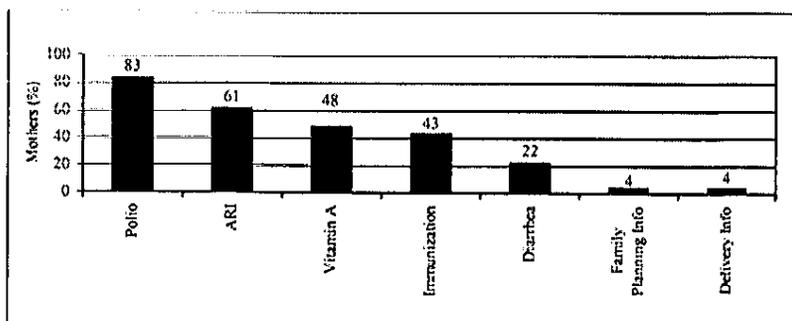
Graph 5 shows the different methods of FCHV support by community leaders, such as by advertising their services (33%) and by helping FCHVs when they ask for help (26%). Graph 6 shows that 61% of mothers reported that they support FCHVs by going to them when the FCHV calls them and 26% follow their advice as a means of support. This reveals that mothers in the community accept advice from their FCHV, whereas community leaders tend to give the FCHV advice about making local people aware of her activities and the services that she provides. Community leaders primarily support and help their FCHVs by promoting messages about oral polio vaccination and vitamin A distributions in the community. On the other hand, mothers primarily support their FCHV by coming to her assistance when she asks for help.

Graph 6: Mothers' mechanisms of supporting their FCHV as reported by mothers (single answer)



Only 4 mothers out of the 23 mothers interviewed had ever attended a MGM; the majority said they had either not heard when the MGMs were being held, or that no MGMs had been conducted in a long time. When the mothers were asked about the activities performed by FCHVs (Graph 7), 83% knew about oral polio vaccination, 61% mentioned that FCHVs treat ARI and are able to diagnose and treat pneumonia, and 48% knew about vitamin A distribution.

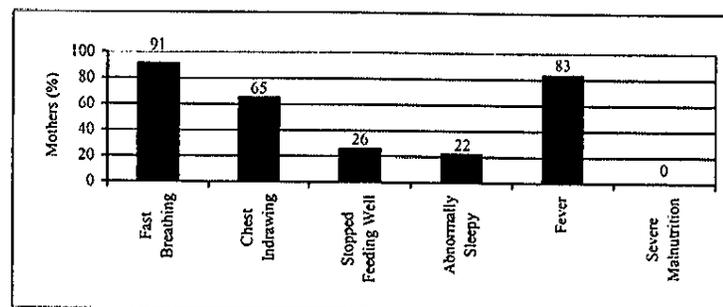
Graph 7: Mothers' knowledge of the different activities that FCHVs perform (multiple answers).



Maternal knowledge of the ARI and diarrhea danger signs was determined. Ninety-one percent (91%) of mothers interviewed recognized fast breathing as a danger sign of ARI, while 83% knew about fever and 65% knew about chest indrawing (Graph 8). However, none of the mothers interviewed mentioned severe malnutrition as an ARI danger sign. Previous studies and training sessions have shown that severe malnutrition is a difficult concept for mothers and FCHVs to understand. This may account for the fact that no mothers mentioned this danger sign. It is

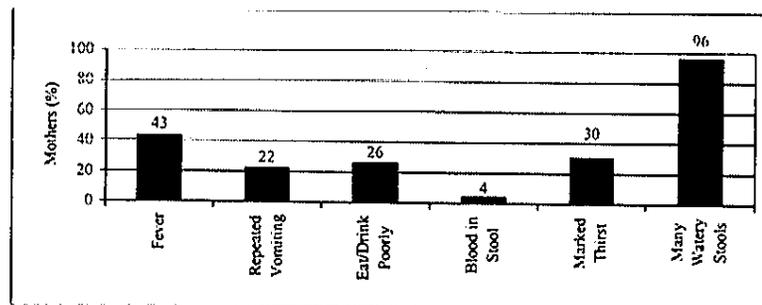
therefore recommended that all of the ARI danger signs be emphasized during future MGMs and at future FCHV training sessions.

Graph 8: Mothers' knowledge of the different ARI danger signs (multiple answer)



Mothers in Makwanpur district were finally asked about the danger signs of diarrhea (Graph 9). It was determined that 96% of mothers knew that having many watery stools was a danger sign, 43% knew about fever, and 30% mentioned marked thirst as a danger sign.

Graph 9: Mothers' knowledge of the danger signs to look for when children have diarrhea (multiple answer)



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## 5. Siraha District

Siraha district (Annex 2) is located in the Eastern Terai region of Nepal, in Sagarmatha Zone. Information from the UNFPA in 2055/56 (1998/99) determined the total population to be 554,384, and the total population under the age of 5 years to be 80,009. The 1991 Nepal Census determined that the literacy rate among women in Siraha district was 13%.

Preliminary visits to Siraha were carried out with the objective of understanding the existing cost recovery strategy and interviewing district members, health facility staff, community leaders, FCHVs, mothers and MG members for opinions about the current situation. Questions were tested in order to create a standard questionnaire for future visits. Once standard questionnaires were developed, a secondary visit to Siraha district was conducted in Chaitra 2057 (April 2001) in order to collect data.

### 5.1 Interview Process

The study in Siraha district was conducted jointly by JSI and SCF (US). Sixteen interviewers were selected by SCF (US) and were oriented on the cost recovery strategy and the interview process by both SCF (US) and JSI. They were divided into four groups, each with one supervisor (Krishna Bandhu, Hira Tiwari, Bishwo Shanti Malla, Indra Bhattarai), and under the direct supervision of JSI/Kathmandu FCHV Program Officer Hira Lal Rajbansh, and SCF (US) Health Program Officer Laxmi Bhattarai. Each group was assigned to complete all the interviews in one VDC per day. Each interviewer began the interview by explaining the study's purpose, and then asked the questions on each of the respective questionnaires. All of the questions were asked in an open-ended manner, and no prompting was given.



*Siraha interview team in front of the SCF (US) office in Lahan, Siraha*

Siraha district has 106 VDCs, each with five treatment FCHVs and four referral FCHVs. SCF (US) has implemented the cost recovery strategy in all of its VDCs, and it works with nine drug retailers in the district. It was decided to randomly select twenty VDCs (19%) for this study in Siraha district using MS Excel (Table 4) (Annex 4).

Table 4: Interviews conducted in Siraha district

POSITION	EXPECTED NUMBER TO BE INTERVIEWED	ACTUAL NUMBER INTERVIEWED
DPHO	1	1
VDCC/VC	20	19
HF InCharge/Officiating InCharge	20	20
Drug Retailers	9	8
Referral FCHVs	40	39
Treatment FCHVs	100	88
Community Leaders	40	40
Mothers with children treated for pneumonia	40	40
MG Members	40	39

Treatment FCHVs are trained to diagnose and treat "pneumonia only" cases with cotrimoxazole, and to refer cases of severe pneumonia in children to the nearest HF. Referral FCHVs are trained to diagnose pneumonia in the same way, but are required to refer all cases of pneumonia regardless of the degree of severity. They refer cases of "pneumonia only" to the treatment FCHV in their VDC, and cases of "severe pneumonia" to the nearest HF.

The DPHO from Siraha district was interviewed. From each of the twenty randomly selected VDCs, the HF InCharge or officiating InCharge and VDCC/VC were interviewed. The questionnaire was pretested with one drug retailer and thereafter interviews were attempted with the eight remaining drug retailers. An attempt was made to interview all five treatment FCHVs from each of the twenty randomly selected VDCs (see Annex). If any treatment FCHV was either not available for one day, had dropped out, or had died, they were excluded from the study. Among the four referral FCHVs in each of the randomly selected VDCs, any two referral FCHVs were selected to be interviewed (Table 4). JSI/Biratnagar Child Health Field Officer Hira P. Tiwari was interviewed, as well as SCF (US) Health Program Officer Laxmi Bhattarai and Health Officer Bishwo Shanti Malla.

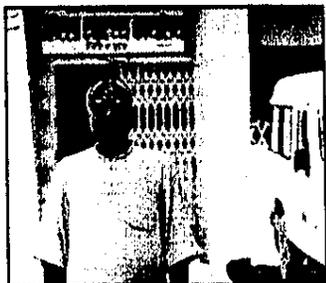


*Siraha interviewers posing for a picture after orientation*

Among the five treatment FCHVs from each randomly selected VDC, any two wards with treatment FCHVs who had treated children under the age of 5 years for pneumonia since the start of the CBAC program were chosen. One community leader (Ward Chairman, Female Ward Member, or Ward Member), one mother whose child under the age of 5 years was treated for pneumonia by the FCHV, and one MG member were interviewed in each of the two wards selected. A total of forty community leaders, forty mothers with children under the age of 5 years who had pneumonia, and forty MG members would therefore be interviewed (Table 4).

## 2 Results of Interview with DPHO

The Community-Based ARI/CDD (CBAC) program in Siraha district was implemented in Baishaakh 2056 (April/May 1999). District Public Health Officer / ARI Focal Person Ramesh Prasad Singh was inspired to start once he learned that 70/1000 children under the age of 5 years die from pneumonia each year in his district. During the initiation of the CBAC program, he was approached by SCF (US) with the idea of recovering the cost of pediatric cotrimoxazole by having FCHVs sell the antibiotic to caretakers. As a result, the CBAC program and a cost recovery strategy for cotrimoxazole were both started at the same time in Siraha district.

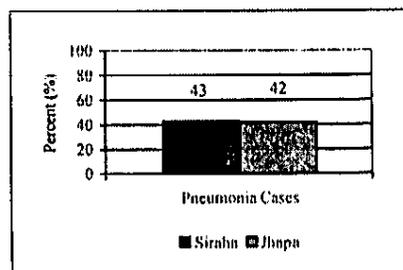


DPHO/ARI Focal Person Ramesh Prasad Singh

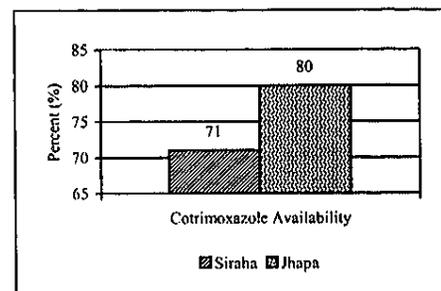
A marketing network has been established in Siraha district, in which cost recovery activities work. The company Royal Drug Limited provides cotrimoxazole tablets to selected wholesalers. The wholesaler Contraceptives Retail Sales (CRS) provides these tablets as well as other commodities such as ORS packets, family planning pills, condoms and Clean Delivery Kits to the ten selected drug retailers in the district, who then supply these commodities to FCHVs. Treatment FCHVs in Siraha charge the same prices for cotrimoxazole as FCHVs in Makwanpur district; 12 Rs for 20 cotrimoxazole tablets and 18 Rs for 30 cotrimoxazole tablets. They are required to replenish their drug supply from one of the ten authorized drug retailers in the district. Treatment FCHVs make a profit of Rs 2 from the sale of 20 tablets and Rs 3 from the sale of 30 tablets when they replenish their cotrimoxazole supply at an authorized drug retailer. Ten to twelve FCHVs in Siraha district were appointed as sales agents by SCF (US) to sell ORS packets for Rs 6 each. Other FCHVs in Siraha district do not sell ORS packets, and BPCs are sold by no FCHVs.

In order to determine if charging the community for cotrimoxazole in Siraha was affecting whether people were going to FCHVs for treatment, data from Siraha and Jhapa districts were compared. Jhapa is a comparable district with Siraha in terms of location, region and size. The CBAC program was started in Jhapa in 1998, and FCHVs and HF staff provide cotrimoxazole free to the community. The percentage of expected pneumonia cases treated during the first year of the program in Siraha was 43%, compared with 42% in Jhapa, demonstrating that charging the community for cotrimoxazole in Siraha had no effect on the number of patients going to the FCHV for treatment (Graph 10). JSI and SCF (US) monitoring data determined that 71% of FCHVs in Siraha had at least 20 cotrimoxazole tablets at the end of the first year, while 80% of FCHVs in Jhapa district had at least 20 cotrimoxazole tablets at the end of the first year of the program (Graph 11). This demonstrates that cotrimoxazole availability among FCHVs in Siraha district is lower than among FCHVs in Jhapa district, alluding to the possibility of problems experienced by FCHVs in the resupply of cotrimoxazole.

Graph 10: Percentage of expected pneumonia cases treated during the first year of the programs in Siraha and Jhapa districts



Graph 11: Cotrimoxazole availability among FCHVs after the first year of the program in Siraha and Jhapa districts



DPHO Singh believes his role in the CBAC program and cost recovery strategy is to provide all HF and VDC members in the district with information about how cost recovery activities are running so they can run smoothly. He feels that cost recovery activities in Siraha district can be improved by holding monthly meetings with the health organizations who supervise the strategy in order to obtain support and feedback. DPHO Singh believes that since this is a community program, it is imperative that the community be involved in making it sustainable.

### 5.3 Results of HF Staff and Drug Retailer Interviews

Interviews with HF staff concluded that all FCHVs from 16 HF (80%) had received ARI training. The reasons why FCHVs from the 4 HF in the remaining VDCs had not received ARI training, was that there were many new FCHVs in the VDC who had as yet only attended Refresher Training but not ARI training. Sixty-five percent (65%) of HF staff interviewed said that they discuss the CBAC program and cost recovery strategy during the monthly HF meetings, and 75% of HF staff interviewed said that the programs were running smoothly in their VDCs.

80% FCHVs received ARI Training
65% HF staff discuss CBAC & cost recovery
75% HF staff say programs running smoothly

When looking at the overall program, 45% of HF staff interviewed believed that community leaders felt good about both the CBAC program and cost recovery strategy in the district, and 45% said that these leaders help with the programs. Ninety percent (90%) of HF staff interviewed believe that community members take their children first to the FCHV for treatment when they are sick with ARI or diarrhea. They supported their beliefs by saying that community members know that FCHVs have the knowledge and skills to diagnose and treat pneumonia, and they have supplies of cotrimoxazole and ORS packets. The remaining 10% of HF staff who said that community members do not take their children to the FCHV first replied that the community does not believe that FCHVs can treat ARI and diarrhea.

60% HF staff supervise strategy & sale of cotrim
65% HF staff raise awareness of cotrim importance
25% HF staff raise awareness of cost recovery strategy

When asked about their roles in the cost recovery activities, 60% of HF staff interviewed said that they supervise the strategy and the sale of cotrimoxazole. Sixty-five percent (65%) said that they work to make the community aware of the importance of cotrimoxazole and that they must buy it. Finally, 25% of HF staff interviewed said that they work to make the community aware of the cost recovery strategy. Interviews determined that 50% of HF staff interviewed had supervised FCHVs in the CBAC program and cost recovery activities during the past three months.

HF staff was finally asked for their recommendations to improve the CBAC program and cost recovery strategy in Siraha district. Fifty percent (50%) recommended training FCHVs every 6 months. Forty percent (40%) said that cotrimoxazole should be given to patients free of charge, while 15% suggested either selling cotrimoxazole everywhere or making it free everywhere in the district.

HF Recommendations
50% more FCHV training
40% free cotrimoxazole
30% HF & CHW feedback & supervision
25% FCHV salary
25% FCHV preference: educated, <50 years
25% advertise program and strategy
15% sell cotrimoxazole everywhere or give free everywhere

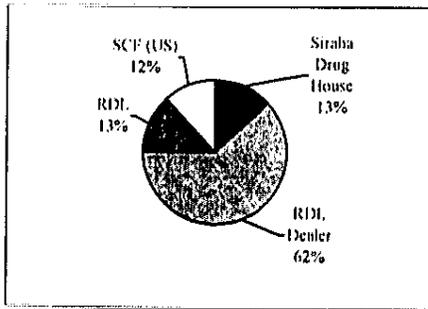
It was suggested by 30% of HF staff that monthly meetings be held between HF staff and CHWs for feedback and supervision. Twenty-five percent (25%) of the staff proposed giving FCHVs a salary, another 25% recommended giving preference to educated women under the age of 50 years to become FCHVs, and another 25% suggested advertising about the CBAC program and cost recovery strategy in the community.

Other recommendations include making cotrimoxazole tablets available at more locations in the district, receiving more VDC support, giving hard-working FCHVs some kind of recognition or reward for their good work, giving FCHVs a uniform, and allowing all FCHVs (treatment and referral) to treat pneumonia.

Twenty-five percent (25%) of HF staff interviewed were aware of problems in the way in which the cost recovery activities were working in their VDCs. Sixty percent (60%) of these individuals staff said that community members did not want to pay for cotrimoxazole, and they suggested informing the community about the advantages of cotrimoxazole, and the reasons why they are being charged for the drug. Twenty percent (20%) of HF staff mentioned FCHV difficulties to access cotrimoxazole, and another 20% voiced concerns that people get cotrimoxazole free at HFs but must pay for the same drug with the treatment FCHV. They mentioned letting FCHVs replenish their cotrimoxazole supply at a HF as a solution to the former problem, and as a solution to the latter problem mentioned either making cotrimoxazole free everywhere or charging for it everywhere in the district.

Eight of nine ten drug retailers in Siraha district were interviewed. It was determined that they had been selling drugs for an average of 7.9 years (range: 3 years to 15 years, mode: 3 years, median: 8.5 years). All of the drug retailers interviewed had received training about the sale of medications from the Department of Drug Administration. They had also all received training from SCF (US) in 2055 (1998) about selling cotrimoxazole to FCHVs. The training that they had received included how to sell family planning items (mentioned by 63% or five drug retailers), Clean Delivery Kits (mentioned by 25% or two drug retailers), and social marketing information (mentioned by 13% or one drug retailer).

Graph 12: Places where drug retailers get cotrimoxazole (single answer)

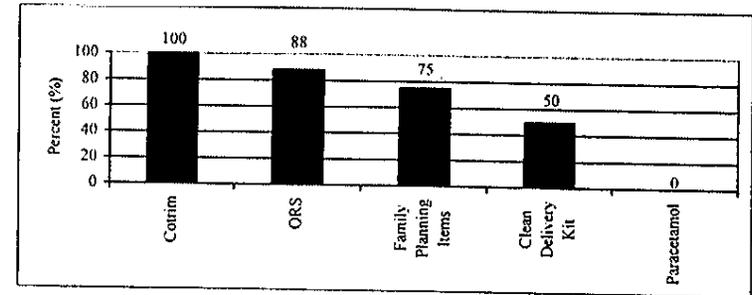


Each drug retailer said that they receive advice about selling cotrimoxazole from SCF (US). One retailer also mentioned obtaining advice from the HF in his ward, while another retailer recalled receiving advice from the DHO. Every drug retailer said that they had no problems selling cotrimoxazole to FCHVs. However, one individual said that many of his tablets would expire soon. He estimated that 8500 cotrimoxazole tablets would expire in May 2002. Another remarked that ORS packets and Clean Delivery Kits were not always available on the market. Interviews revealed that there had been no shortages of cotrimoxazole.

All of the drug retailers interviewed said that FCHVs bought cotrimoxazole from them, while 88% of retailers knew that treatment FCHVs are able to treat pneumonia. It was determined that an average of 9.8 FCHVs bought cotrimoxazole from each drug retailer (range: 5 to 15 FCHVs, mode

and median: 10 FCHVs). Graph 12 shows the places from where drug retailers get cotrimoxazole tablets. The majority of retailers (62%) receive their tablets from a Royal Drug Limited dealer. All of the drug retailers interviewed had the R.D. Prim brand of cotrimoxazole. Graph 13 illustrates the other supplies purchased by FCHVs.

Graph 13: Supplies bought from drug retailers by FCHVs (multiple answer)



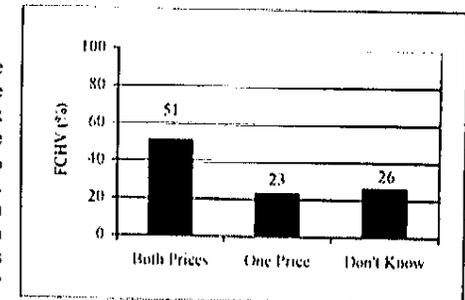
#### 5.4 Results of Interviews with referral FCHVs



Interviewing an FCHV in Siraha district

Four of the 39 referral FCHVs interviewed in Siraha district were literate. Only one FCHV had not received ARI training since she had just become an FCHV 2 years earlier. However, she did attend ARI Refresher training. When asked about what they had learned during ARI training, 92% of referral FCHVs mentioned learning how to diagnose pneumonia in children by counting respiratory rates using a sound timer. Another 92% said they learned about where to refer cases of pneumonia after having diagnosed them. Finally, 90% spoke about learning appropriate methods of home therapy in order to prevent a child from becoming more sick.

Graph 14: Referral FCHV Knowledge about the price of cotrimoxazole



Referral FCHVs were asked about where they first refer children whom they have diagnosed with pneumonia. Fifty-six percent (56%) stated that they refer the child to the treatment FCHV, while 41% refer the child to the nearest health facility. One FCHV, Domni Devi Chaudhari from Dodana VDC, buys cotrimoxazole from Lahan and treats children whom she has diagnosed with pneumonia herself. Every referral FCHV interviewed knew that the treatment FCHV buys and sells cotrimoxazole. When asked about the price, 51% of referral FCHVs knew the correct price for 20 and 30 cotrimoxazole tablets, 23% knew the price of one set of tablets, and 26% of referral FCHVs did not know either of the prices (Graph 14.)

inally referral FCHVs were asked about ways in which the current cost recovery strategy and BAC program could be further improved and sustained. Twenty-one percent (21%) of referral CHVs suggested having more frequent training sessions. Fifteen percent (15%) asked that they be given cotrimoxazole so that they too can treat children with pneumonia, and another 15% said that they should receive a salary for their work. Other recommendations (49%) are summarized in table 5.

Table 5: Referral FCHV recommendations for the improvement and sustainability of the CBAC program and cost recovery strategy

RECOMMENDATIONS			
HF and FCHV feedback on work	14%	Recognition of good work	6%
Give poor free cotrimoxazole	11%	Reduce price/provide cotrim free	6%
Help with MGMs	6%	Advertise FCHV services	6%

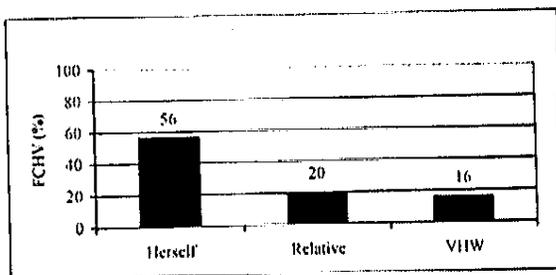
### 5.5 Results of Interviews with treatment FCHVs

A total of 88 treatment FCHVs were interviewed in Siraha district. These women had been working as FCHVs for an average of 10.1 years, and 47% were literate. Every treatment FCHV interviewed had received ARI training, and they all knew about selling cotrimoxazole as part of the cost recovery strategy. When asked where they believe community members take their children when they are sick with ARI or diarrhea, 75% of treatment FCHVs said that they first go to an FCHV. Eighteen percent (18%) of FCHVs believed that community members take their children to the nearest HF and 9% said community members take their children to a private doctor.



Interviewing an FCHV in Siraha district

Graph 15: Ways in which FCHVs replenish their cotrimoxazole supply (multiple answer)

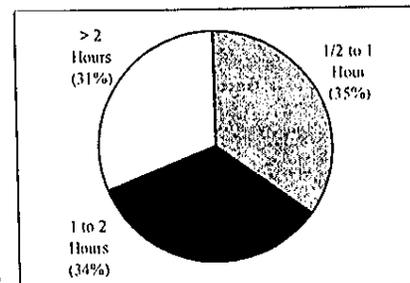


the HF, while one FCHV (1%) said that another FCHV brings the drug to her. Six FCHVs (7%) said that they did not buy cotrimoxazole since community members refused to buy the medicine from them. When these results were analyzed by literacy, it was revealed that more illiterate treatment FCHVs were replenishing cotrimoxazole themselves.

When treatment FCHVs were asked how they replenish their supply of cotrimoxazole, 56% go to the drug retailer themselves, 20% get a relative to bring them more tablets, and 16% get tablets from an AHW (Graph 15). Thirteen percent (13%) of FCHVs replenish their cotrimoxazole tablets during training sessions. Two FCHVs (2%) said they replenish cotrimoxazole from

Graph 16 displays the length of time required for FCHVs to walk to the nearest drug retailer in order to resupply cotrimoxazole. It was determined that 35% of FCHVs had to walk between half to one hour, 34% walked between one and two hours, and 31% had more than a two hour walk to the drug retailer. Five treatment FCHVs recalled coming back from the drug retailer without cotrimoxazole tablets because the storekeeper was away.

Graph 16: Length of time for FCHVs to reach drug retailer to purchase cotrimoxazole (single answer)



At the time of the interview, 57% of treatment FCHVs had at least 20 cotrimoxazole tablets with them. Among the 39% of FCHVs without any cotrimoxazole tablets, 24% said their supply of cotrimoxazole had just finished and 18% said that they could not get community members to buy cotrimoxazole from them so they stopped buying more tablets. Other reasons included that the drug retailer was too far away, they had no time to replenish their cotrimoxazole supply, and they had no money to buy more cotrimoxazole tablets.

63% NO PROBLEMS	37% PROBLEMS
71% with >20 tablets	33% with >20 tablets

Sixty-three percent (63%) of treatment FCHVs reported having no problems in resupplying cotrimoxazole tablets.

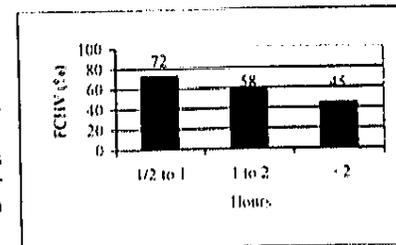
Among these individuals, 71% actually had at least 20 cotrimoxazole tablets with them. Among the 37% of FCHVs who mentioned experiencing problems, 67% reported having no money to replenish their cotrimoxazole supply since community members refuse to buy the medicine from them. Another 30% said that the drug retailer was too far away, and 3% said that community members did not know that they were required to buy cotrimoxazole from them. It was determined that 33% of FCHVs experiencing difficulties in obtaining cotrimoxazole had at least 20 tablets.

Table 6: Results of Cotrimoxazole surveys

FCHVs with Cotrimoxazole 61%		FCHVs without Cotrimoxazole 39%	
At least 20 tablets	91%	Just finished supply	24%
Less than 20 tablets	9%	No time to buy	20%
"R.D. Prim" brand	91%	HF close and free	20%
		Do not buy	18%
		VHW is buying	6%

It was determined that 91% of FCHVs interviewed had the authorized "R.D. Prim" brand of cotrimoxazole with them (Table 6). Interviewers were unable to view the brand of cotrimoxazole for 5 FCHVs whose tablets were locked away in a cupboard. Graph 17 shows cotrimoxazole availability among treatment FCHVs in terms of the distance they must travel to the nearest drug retailer. An interesting trend was unearthed; it was discovered that as the distance to the drug retailer increases, cotrimoxazole availability with treatment FCHVs decreases.

Graph 17: Distance to drug retailer and cotrimoxazole availability.



Among the treatment FCHVs interviewed in Siraha district, 88% felt good about selling cotrimoxazole tablets to the community. The 12% of treatment FCHVs who did not like having to sell cotrimoxazole stated that community members believe FCHVs receive cotrimoxazole freely and charge them for the medicine to earn money. Community members are also able to get free cotrimoxazole tablets at the HF's, and therefore do not understand why they must pay the FCHV for the same medication. FCHV Bechni Devi Baidha from Badhara Mal VDC said that she has stopped selling cotrimoxazole because people in the community feel that she should give them the medicine for free. FCHVs Maya Lama (Badhara Mal VDC), Ban Laxmi Shrestha (Chandralalpur VDC) and Mina Devi Singh (Chandralalpur VDC) all said that they do not sell cotrimoxazole because the HF is close and so community members go there for free medicine. However, according to FCHV Rani Bati Devi Yadab (Sukhipur VDC) the situation looks promising. "At first people refused to pay for cotrimoxazole. But, they now see that cotrimoxazole is effective in curing pneumonia in children, and now they are not reluctant to pay for such an effective drug"

71% FCHVs treated at least 1 case
169 cases "pneumonia only" treated
98% (166 cases "pneumonia only") followed up
16 cases "severe pneumonia" referred
50% (8 cases "severe pneumonia") followed up

Eleven (11) of the 88 treatment FCHVs interviewed in Siraha district revealed that they were not treating pneumonia since community members either refused to buy cotrimoxazole or because they lived close to a HF where

cotrimoxazole was free. As a result, the number of ARI cases in the three months preceding the interviews was analyzed among 77 treatment FCHVs (or 88% of FCHVs interviewed). The following data was obtained through a review of treatment FCHV records immediately after interviews in Siraha district. Fifty-five (55) FCHVs (or 71%) had treated at least one case of pneumonia in the three months before the interviews, and each FCHV treats an average of one pneumonia case per month. A total of 169 pneumonia cases were treated by these FCHVs, and among these 166 cases (98%) were followed up by the FCHV. Interviews determined that five FCHVs had referred cases of severe pneumonia to the nearest HF. A total of 16 cases of severe pneumonia were referred, and records from the treatment book showed that 50% of these cases had been followed up on the third day.

Graph 18: MG member methods of support for their FCHV as reported by FCHVs (multiple answer)

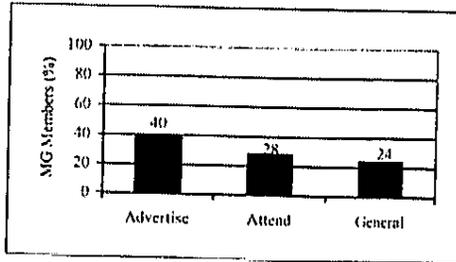


Table 7: Other ways in which MG members support their FCHVs

MECHANISMS OF SUPPORT
During Vitamin A distribution
Help to organize MGMs
Listen to information taught at MGMs
Pass on information to other women in the community
Motivate and inspire FCHV to work

Treatment FCHVs were next questioned about the support that they receive from MG members. Seventy-six percent (76%) of FCHVs interviewed stated that they received some kind of support from members, while 24% of FCHVs mentioned not receiving any support. Graph 18 shows the ways in which MG members assist their FCHV; 40% of FCHVs reported that members advertise their services in the community, 28% said that members attend the meetings that they organize, and 24% of FCHVs stated that members help with everything. Other methods of FCHV support by MG members are summarized in Table 7. Among the treatment FCHVs receiving no support from mothers, 24% stated that they did not need help, 14% said that there had been no MGMs, and 10% of FCHVs said that people do not attend the meetings because of time constraints or because they are not interested. Ten percent (10%) of FCHVs mentioned that they

need a salary in order to organize MGMs, and another 10% of FCHVs said that community members do not believe in their work and therefore do not support them.

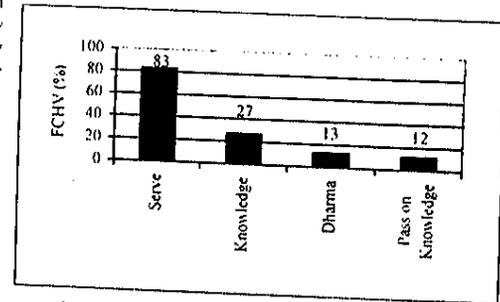
Fifty-seven percent (57%) of the treatment FCHVs interviewed receive support from HF staff through training sessions to learning necessary skills. Another 28% of FCHVs receive support from HF staff in terms of the resupply of cotrimoxazole. Other means of HF staff support are summarized in Table 8. Nineteen percent (19%) of FCHVs interviewed reported receiving supervision from district health staff.

Table 8: FCHV support from HF staff

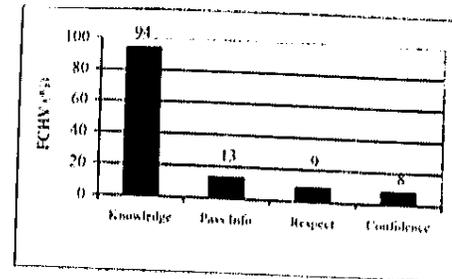
HF MECHANISMS OF FCHV SUPPORT	
During Vitamin A and Polio distributions	Come to take reports
Organization of MGMs	VIIW supervision
Resupply of Cotrimoxazole and ORS	Advertise about FCHV services
During immunizations	Advise

When the treatment FCHVs interviewed in Siraha district were asked about their reasons for continuing their work as an FCHV when they receive no monetary incentive for doing so, 83% said they worked in order to serve their community. Twenty-seven percent (27%) of FCHVs said they worked to increase their own knowledge and skills, while 13% worked to earn *Dharma* and 12% worked to pass on the knowledge and skills that they have acquired to others in their community. These results are summarized in Graph 19. Other reasons the FCHVs gave for continuing their work as FCHVs included: their ability to make medicines available at the village level, to gain community recognition and respect, and to meet more people. Only 2 FCHVs out of the 88 FCHVs interviewed were unhappy with their work as an FCHV. FCHVs Ram Kumari Yadav (Navrajpur VDC) and Laxmi Rai (Badhara Mal VDC) expressed feelings of grief because their families did not like them working for no salary. FCHV Laxmi Rai said, "It is hard for a daughter-in-law to be an FCHV and get no salary. My family does not like it and they are unhappy with me"

Graph 19: Main reasons that FCHVs continue their work (multiple answer)



Graph 20: Main personal changes experienced by FCHVs (multiple answer)



Graph 20 shows the changes that have occurred in the lives of FCHVs since they started volunteering. Ninety-four percent (94%) reported gaining knowledge and skills, 13% could pass on their new knowledge to community members, 9% gained community and family respect, and 8% acquired the confidence to speak and voice their opinions in front of others. Other types of changes experienced by FCHVs include the opportunity to meet more people, and the ability to earn a small profit from cotrimoxazole sales.

## 6 Results of Interviews with Mothers with Children Treated for Pneumonia by an FCHV

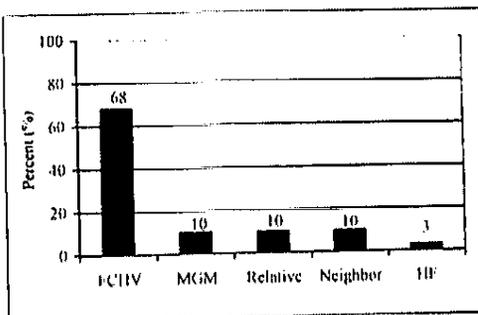
Among mothers whose children had been treated for pneumonia by an FCHV, 97% said that the FCHV had used a sound timer when assessing their child, and 24% said that the FCHV took their child's temperature and pulse, in order to make a diagnosis of pneumonia. After their child was diagnosed with pneumonia, 87% of mothers said that they bought cotrimoxazole from the FCHV. Among the 13% of mothers (5 mothers) who did not buy cotrimoxazole, 2 said it was because the FCHV was their mother-in-law. All of the mothers interviewed said that they gave their children cotrimoxazole according to the FCHV's directions. Seventy-nine percent (79%) of mothers took their child back to the FCHV on the third day for follow up care, and among all of the mothers interviewed, 97% said that their children were cured after being treated by the FCHV. These results are summarized in Table 9.

Table 9: Methods of examination, care, and follow up among mothers whose children had been treated for pneumonia by an FCHV

Sound Timer	Temp & Pulse	Bought Cotrimoxazole	Followed Directions	Correct Dose	Followed Up on Third Day	Cured
97%	24%	87%	100%	43%	79%	97%

When asked the dose of cotrimoxazole, 43% of mothers responded with the correct dose. Looking at these results by literacy revealed that among those mothers who knew the correct dose of cotrimoxazole, 56% were literate and 39% were illiterate. This can be explained by 2 possible reasons; literate mothers wrote down the required cotrimoxazole dose and this enabled them to remember it better than illiterate mothers, or illiterate mothers did not recall the correct dose due to the length of time that had passed since their child was treated for pneumonia. It is also interesting to note that 21% of mothers did not follow up on their child's pneumonia treatment with the FCHV on the third day. This indicates that third day follow up must be emphasized during training sessions.

Graph 21: Ways in which mothers learned that FCHVs can diagnose and treat pneumonia in children (single answer)

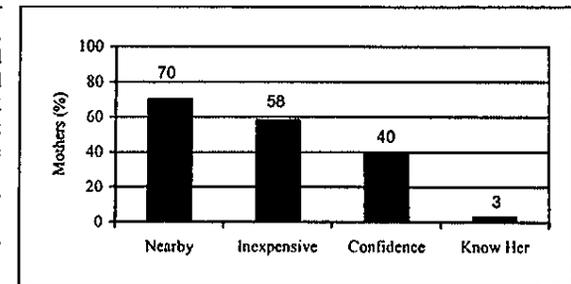


Graph 21 shows how mothers, whose children had pneumonia and were treated by the FCHV, knew that FCHVs were able to treat pneumonia. Sixty-eight percent of mothers interviewed said an FCHV told them, while 10% of mothers received the information from the MGM, another 10% found out from neighbors, and another 10% discovered the information because a relative of theirs is an FCHV. Every mother interviewed was happy with the treatment that her child received from the FCHV. One of the mothers interviewed, Roniya Devi from Nabrajpur VDC, said, "My mother-in-law is an FCHV. I feel very proud when villagers come to my house to receive treatment and advice from my mother-in-law" This reveals that a total of 78% (68% from FCHV and 10% from an FCHV relative) of mothers obtained information about the treatment of pneumonia from an FCHV. FCHVs therefore play an important role in making the

community aware of the services that they provide, and are an important source of information dissemination to the community.

Graph 22: Reasons why mothers take their child to the FCHV for treatment (multiple answer)

These mothers were asked about their reasons for taking their child to an FCHV for treatment. Seventy percent (70%) replied that the FCHV lived nearby and thus they did not have to travel far for treatment. Fifty-eight percent (58%) said that the FCHV was cheap and 40% said that they were confident in her treatment. These results are depicted in Graph 22. They prove that the majority of people take their sick children to FCHVs because they are able to get treatment in the village. FCHVs live among community members and are available 24 hours a day. They are therefore more easily accessible than HF or private doctors who are only open for certain hours a day.

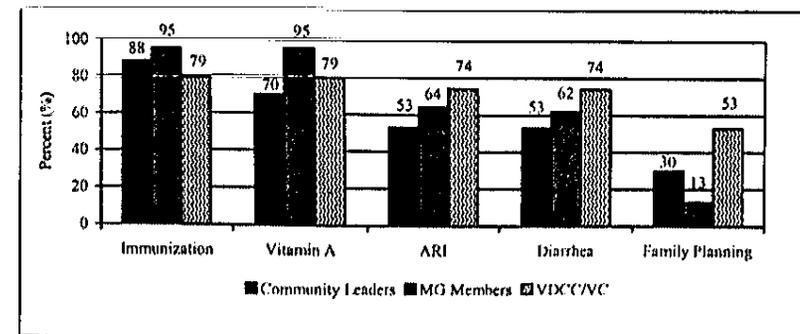


Mothers whose children had been treated for pneumonia by the FCHV were asked if they would advise others in their community to go to the FCHV for treatment if their child was sick. Ninety-five percent (95%) of mothers replied in the affirmative. The 2 mothers (5%) who said that they would not recommend the FCHV to their neighbors, replied that it was because the FCHV charges for cotrimoxazole, whereas it is free at the HF.

## 5.7 Results from Interviews with VDCC/VC, Community Leaders, and MG Members

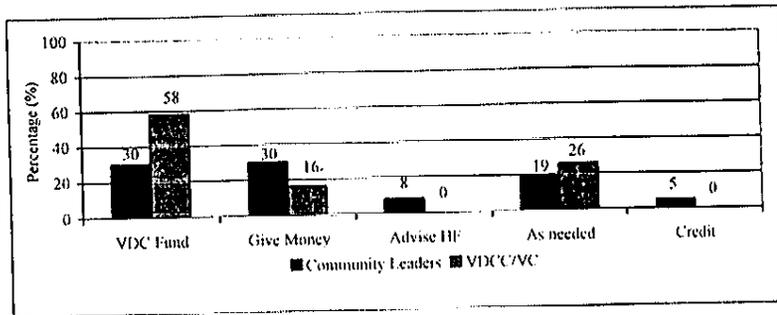
VDCC/VC, community leaders and MG members were asked about the different activities that FCHVs perform (Graph 23). The majority of VDCC/VC, community, and MG members knew that FCHVs conduct immunization and vitamin A distribution. However, only 53% of VDCC/VC, 30% of community leaders, and 13% of MG members mentioned that FCHVs conduct family planning activities. While knowledge of ARI and diarrhea is not very high, it is higher than knowledge that FCHVs provide advice about family planning. This exposes the need for FCHV's activities in ARI, diarrhea, and especially family planning to be emphasized in the community.

Graph 23: VDCC/VC, Community Leaders and MG member knowledge of FCHV activities (multiple answer)



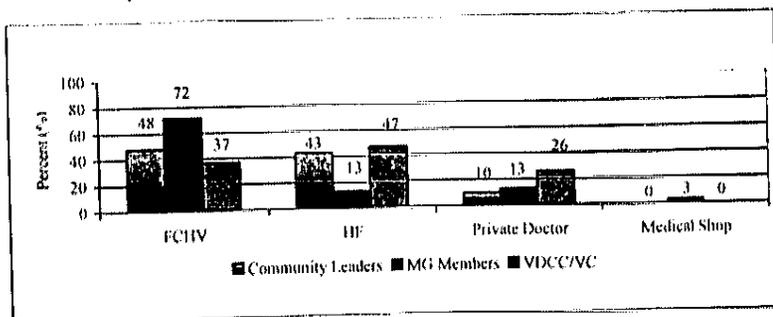
Forty-two percent (42%) of VDCC/VC and 40% of community leaders interviewed said that they inform the community that treatment FCHVs sell cotrimoxazole. Every VDCC/VC interviewed and 93% of community leaders interviewed said that they help those who cannot afford to pay for cotrimoxazole. Economic aid from the VDC fund and giving people money to purchase cotrimoxazole were means by which 30% of community leaders said they help. This was acknowledged by 58% and 16% of VDCC/VC respectively. Of interest is that 8% (or 3 people) of community leaders said that they advise those who cannot pay to go to the nearest HF where treatment is free. These results are illustrated in Graph 27.

Graph 27: Methods in which VDCC/VC and community leaders help those who can not pay for cotrimoxazole (single answer)



When asked where they first take their children when they are sick with ARI or diarrhea, 72% of MG members, 48% of community leaders and 37% of VDCC/VC said to the FCHV. Reasons for doing so include that she is close, she has the knowledge and skills to treat ARI and manage diarrhea, she has medicine to treat pneumonia, and the medicine and treatment is cheap. Thirteen percent (13%) of MG members, 43% of community leaders and 47% of VDCC/VC said that they first take their child to the nearest HF. These findings are shown in Graph 28. This again illustrates that women seem to be more comfortable taking their children to an FCHV than men (VDCC/VC and community leaders). This could be explained by the fact that MG members are able to relate better with other women, and therefore feel that they will be able to articulate their concerns for their child better with an FCHV. Or, it may have to do with the distance to travel; men may be able to travel farther with their children to HFs for treatment, while time and distance away from their homes could limit the places where women take their children.

Graph 28: Places where VDCC/VC, community leaders, and MG members first take their children when they are sick with ARI or diarrhea (single answer)



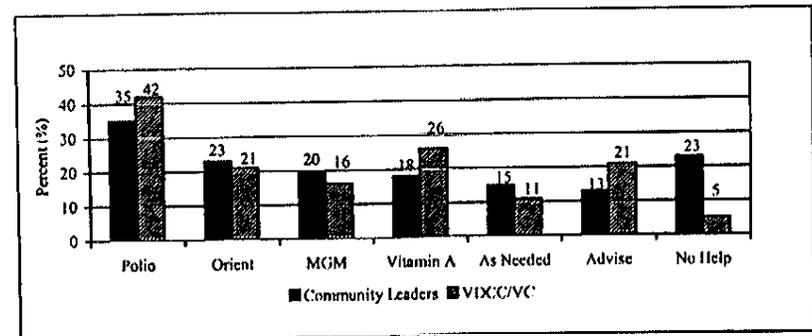
Among those VDCC/VC, community leaders and MG members interviewed in Siraha district, 89%, 83% and 92% respectively, stated that FCHVs worked very well. They maintained that FCHVs provided treatment at the village level so community members did not have to travel far. They also stated that FCHVs had the knowledge and skills to treat ARI and manage diarrhea. FCHVs also passed on their knowledge about cleanliness and sanitation to other men and women in the community in order to prevent children from becoming sick. Ninety-two percent (92%) of MG members said that they advise their neighbors to take their child to the FCHV when they are sick with ARI or diarrhea. It was determined that 89% of VDCC/VC, 63% of community leaders and 41% of MG members knew that FCHVs receive no salary for their work. These results are summarized in Table 11.

Table 11: Opinion about FCHV work and knowledge that FCHVs receive no salary

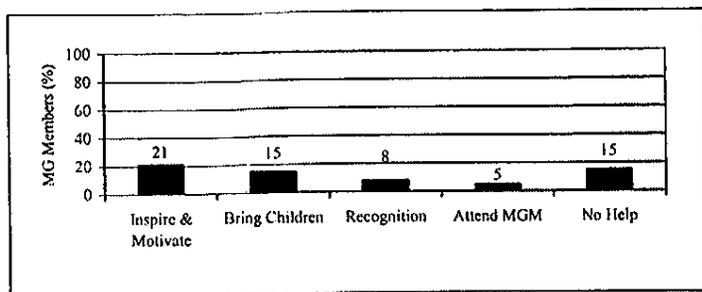
	VDCC/VC	COMMUNITY LEADERS	MG MEMBERS
FCHV Does Good Work	89%	83%	92%
Know No Salary	89%	63%	41%

VDCC/VC, community leaders and MG members were asked about the ways in which they support their FCHV (Graphs 29 and 30). The majority of MG members (21%) said that they inspire, encourage and motivate their FCHV to continue to work. Forty-two percent (42%) of VDCC/VC and 35% of community leaders said they help with oral polio distribution, while 21% of VDCC/VC and 23% of community leaders said they orient local people about the services FCHVs perform. One reason explaining the fact that more community leaders than VDC members seem to be advertising the cost recovery program and FCHVs services as well as helping during MGMs, may be that community leaders are more closely associated with FCHVs than VDC members. Of importance is that 5% of VDCC/VC (1 person), 23% of community and 15% of MG members said that they offer their FCHV no help.

Graph 29: Methods by which VDC and community leaders support their FCHV (multiple answer)



Graph 30: Methods by which MG members support their FCHV (single answer)



When VDCC/VC and community leaders were asked about ways in which the CBAC program and cost recovery strategy can be improved and sustained, 29% of VDCC/VC and 8% of community leaders responded that more advertising was needed to increase awareness among local people about the program and strategy (Table 12). Sixty-four percent (64%) of VDCC/VC and 25% of community leaders replied that FCHVs needed more training, 53% of VDCC/VC and 13% of community leaders said that FCHVs should be given a salary for their work. Thirteen percent (13%) of community and 6% of VDCC/VC said that cotrimoxazole should be given free. Other methods of improving and sustaining the CBAC program and cost recovery strategy mentioned by community leaders are provided in Table 13.

Table 12: Main methods of CBAC and cost recovery program improvements and sustainability, as reported by community leaders

	VDCC/VC	COMMUNITY LEADERS
FCHV Training	64%	25%
Advertise	29%	38%
FCHV Salary	53%	13%
Free Cotrim	6%	13%

Table 13: Other methods of CBAC program and cost recovery strategy improvement and sustainability, as reported by community leaders

IMPROVEMENTS & SUSTAINABILITY	
Let all FCHVs treat pneumonia	Train FCHVs about Kala-Azar
Free cotrimoxazole	Drugs available at closer locations
Advice and Follow-up on FCHV work	Recognition of FCHVs with good work
More FCHVs in each ward	Give FCHV more equipment
Community understanding of strategy	More drugs available with FCHV



Relaxing after an interview

## 6. Interviews with JSI Child Health Field Officers

### JSI/Hetauda

Senior Child Health Field Officer, Dev Dhoj Karki, JSI/Hetauda has been working with JSI for nearly 9 years.

He became interested in cost recovery activities when he visited Dang valley of the Mid-West Region, where FCHVs in 14 VDCs were selling cotrimoxazole tablets as initiated by the Nepal Red Cross Society. He was reminded of these cost recovery activities during an exchange visit from the Nuwakot district SCF staff, HF staff, local leaders and FCHVs in Baishaakh 2056 (April/May 1999), coordinated by JSI and SCF (US). The visit took place in Nibuwatar VDC in Makwanpur district, where Nuwakot FCHVs asked Nibuwatar FCHVs the following question: If donor agencies stop providing you with cotrimoxazole, what will you do? FCHVs from Nuwakot explained that they charge caretakers for cotrimoxazole in order to recover the cost of the tablets. They said that they had no difficulties getting caretakers to pay, and that as a result they have become self sufficient in maintaining a supply of cotrimoxazole. Nibuwatar FCHVs were interested and motivated to also charge caretakers for cotrimoxazole, as were the Nibuwatar SHIP, the DHO, and JSI staff. As a result, they decided to mobilize communities to implement the strategy.

VDC members were oriented about the cost recovery ideas during their VDC monthly meeting. They were told that cotrimoxazole tablets and BPCs would be sold in the wards of their VDC, and were asked to pass on this information to their community members. Monthly meetings would be held for FCHVs at the HF's, and the VDC was asked to decide the type of support it would give to FCHVs for attending this monthly meeting.

Dev Dhoj has been involved in planning efforts with DHO staff to create a sustainable cost recovery program. He has been instrumental in motivating HF staff, community leaders, and FCHVs about the cost recovery strategy. He says that currently 11 VDCs in Makwanpur have implemented the cost recovery strategy, and many other VDCs are committed to starting this activity in the next fiscal year. Monthly FCHV meetings are being conducted in 21 of the 43 VDCs in the district, and community leaders are cooperative and supportive of the program.

Dev Dhoj believes that regular follow up on the strategies is necessary for the programs to be successful. He feels that DHO staff and other supervisors must encourage FCHVs, HF staff and community leaders to continue with their work in the programs. He suggests continuing internal exchange visits for VDC members, HF staff and FCHVs, as well as conducting workshops among HF staff where the program has been implemented. Dev Dhoj is convinced that inter district exchange visits among VDC members, HF staff and FCHVs would make other districts interested in implementing similar cost recovery strategies in their districts as well.

### JSI/Biratnagar

Hira P. Tiwari is one of JSI's Child Health Field Officers at



Senior Child Health Field Officer JSI/Hetauda Dev Dhoj Karki (left) and Child Health Field Officer Hira Tiwari JSI/Biratnagar (right)

the JSI Regional Field Office JSI/Biratnagar. Before coming to work for JSI, Hira was a Public Health Officer in many districts in Nepal, working in the EPI programs. Hira has been working with JSI for 8 years, where he is involved in the child health training and monitoring programs.

Hira has been involved in child health monitoring programs in Siraha district since the beginning of the CBAC and cost recovery programs. He believes that people in Siraha are becoming motivated to pay for cotrimoxazole as they start to believe in the FCHV's ability to treat pneumonia and the effectiveness of the drug. However, he acknowledges that approximately 30% of people in Siraha district are very poor, and cannot afford to pay for cotrimoxazole. As a result FCHVs find it hard to sell cotrimoxazole to poor people. Hira is also concerned with the low female literacy rate in Siraha district.

Since Hira has been involved in monitoring CBAC activities in Siraha district, he was able to come up with certain recommendations for improving the cost recovery strategy in the district. He believes that the most important aspect is to motivate community leaders about the cost recovery strategy. He feels that frequent follow up with the community leaders will encourage them to participate in the program, and will advance methods of FCHV support. Hira also spoke of motivating the VDC to donate money for those poor people who are not able to afford the price of cotrimoxazole, and he mentioned trying to increase literacy among FCHVs. Hira finally specified that the cost recovery strategy should be implemented in all HF's in the district, and that methods to increase FCHV accessibility to cotrimoxazole should take place. He suggested letting HF's get supplies of cotrimoxazole from drug retailers and allowing FCHVs to replenish their cotrimoxazole supplies at the HF in their VDC. This would also allow FCHVs to be monitored on a regular basis.

Hira believes that in order for a cost recovery strategy to be successful in a district, there must first be community belief that FCHVs can treat pneumonia. He recommends letting FCHVs give cotrimoxazole to parents and caretakers for free at the beginning, to allow the community to believe in the FCHV's ability to treat pneumonia and the effectiveness of cotrimoxazole. He says that once this has been achieved, community members will not be as reluctant to pay for cotrimoxazole once they have an understanding of how important it is to ensure that it is constantly available. Hira also recommends implementing the cost recovery strategy at all HF's in the district in order to avoid discrepancies and difficulties for FCHVs. "If the cost recovery strategy is not implemented at all HF's in the district, the objective to reduce child mortality from pneumonia will not be achieved." Hira is confident that adequate follow up and monitoring activities after a cost recovery program has been implemented will allow it to be sustained.

## 7. Interviews with SCF (US) Program Officers

Laxmi Bhattarai is the Health Program Officer at SCF (US). She has been working with SCF (US) since January 1995 when she began as a Program Officer for the empowerment of women in reproductive health and family planning in Siraha district. She is now working with the IMCI and reproductive health programs in Siraha, and is involved in polio eradication programs in Siraha and Kailali districts, maternal and neonatal care in Kailali, adolescent sexual reproductive health programs, and child survival programs.

Bishwo Shanti Malla is a Health Officer with SCF (US) and has been with the INGO for 15 years. She began by working as a staff nurse involved in the Maternal and Child Health (MCH) clinics and then became a training officer before starting her work as a Health Officer. Her current responsibilities are with the child survival program and the MCH clinics.

Laxmi and Bishwo Shanti first became involved in the cost recovery activities in Siraha district during a meeting with the Child Health section of the DPHO, at which ideas for program sustainability were brought up. At that meeting, it was decided to initiate activities to recover the cost of cotrimoxazole in Siraha, based on experience in Nuwakot district. First a base-line survey of the commodities available, the cost of commodities, and the affordability of prices to the community was conducted. Social marketing training was next provided to SCF (US) HF coordinators and staff. Royal Drug Limited provides cotrimoxazole tablets in bulk to the wholesaler Contraceptives Retail Sales (CRS), who in turn provides these tablets and other commodities (ORS packets, Clean Delivery Kits, family planning pills and condoms) to drug retailers, who provide them to FCHVs.



Health Program Officer Laxmi Bhattarai (right) and Health Officer Bishwo Shanti Malla (left)

Bishwo Shanti said that when the cost recovery activities first started community members were not happy and were reluctant to pay for cotrimoxazole since they felt that government services should be free. She said that after the first six months of the cost recovery activities only 50% of people paid for cotrimoxazole. However, she says that now 89% of community members pay for the drug, since they understand that by going to the FCHV they save themselves time and bus fare. Laxmi feels that since the CBAC program and cost recovery activities have been started, community members have become more aware of the services provided by FCHVs and they believe in the FCHV's ability to treat their children. She said, "FCHVs are available 24 hours a day. It is easy for community members to get treatment from FCHVs since they are cheap and close by."

Both Laxmi and Bishwo Shanti feel that the cost recovery activities in Siraha could be improved by using a different wholesaler for cotrimoxazole. Royal Drug Limited provides CRS with the R.D. Prim brand of cotrimoxazole only in bulk. However, many drug retailers are hesitant to purchase cotrimoxazole in bulk since they are aware that the drug is provided for free at HF's and are concerned about being stuck with large quantities of expired cotrimoxazole tablets if people do not buy from them. As a result, both Laxmi and Bishwo Shanti recommend using a different company to provide cotrimoxazole, such as the "Wellcome Company", which can provide both small and large quantities of the tablet on request.

Laxmi also suggests establishing a Community Drug Program (CDP) at HF's in Siraha district, so that HF's can also charge for cotrimoxazole. She believes that this would allow FCHVs to replenish their cotrimoxazole tablets at the nearest HF. Another way of improving FCHV accessibility in the resupply of their tablets would be to increase the number of drug retailers in the district. Laxmi feels that among the 555 treatment FCHVs in Siraha, those who are active in their activities and in selling cotrimoxazole should be provided with refresher training every 3-6 months as well as extra supervision. Bishwo Shanti also recommends more frequent refresher training for FCHVs as well as more community interaction with FCHVs in order to spread awareness of cost recovery activities. She says, "The cost recovery activities in this district allow for the program to be sustainable. FCHVs are very important in this, because if people believe in the FCHV they will always go to them."

## 8. Results from Makwanpur and Siraha Districts

The ARI Strengthening Program was initiated in Makwanpur district in 1994/95 as one of the "treatment" model districts. Therefore, FCHVs in Makwanpur had been treating pneumonia for approximately 4 years when the strategy for recovering the cost of cotrimoxazole was implemented in certain VDCs. The CBAC program and cost recovery strategy in Siraha district were both started at the same time in Spring 1999.

Table 14: Knowledge of FCHV activities among mothers and MG members in Makwanpur and Siraha districts (multiple answer)

ACTIVITY	MAKWANPUR	SIRAHA
Vitamin A	11/23	37/39
ARI	14/23	25/39
Diarrhea	5/23	24/39
Immunization	10/23	37/39

A comparison of mothers' knowledge in Makwanpur district and MG members' knowledge in Siraha district about the activities that FCHVs perform is shown in Table 14 and Graph 31. It is worthy to note that the knowledge of vitamin A distribution, immunization, and diarrhea treatment is higher among MG members in Siraha than Makwanpur. This could be due to the fact that regular MGMs are held in Siraha district, allowing members in this district to better understand the services performed by FCHVs. However, 83% of mothers in Makwanpur mentioned that FCHVs provide oral polio while none of the MG members interviewed in Siraha district mentioned this activity. Overall, this illustrates that the activities conducted by FCHVs need to be emphasized among mothers in both districts.

Graph 31: Knowledge of FCHV activities among mothers and MG members in Makwanpur and Siraha districts (multiple answer)

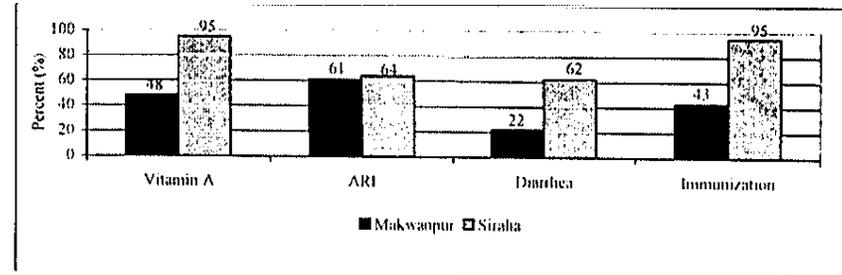


Table 15: Knowledge of ARI danger signs among mothers and MG members in Makwanpur and Siraha districts (multiple answer)

DANGER SIGN	MAKWANPUR	SIRAHA
Fast Breathing	21/23	27/35
Chest Indrawing	15/23	27/35
Stopped Feeding Well	6/23	10/35
Abnormally Sleepy	5/23	5/35
Fever	19/23	18/35
Severe Malnutrition	0/23	3/35

Knowledge of ARI danger signs was compared among mothers in Makwanpur district and MG members in Siraha district. These findings are illustrated in Table 15 and Graph 32.

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Graph 32: Knowledge of ARI danger signs among mothers and MG members in Makwanpur and Siraha districts (multiple answer)

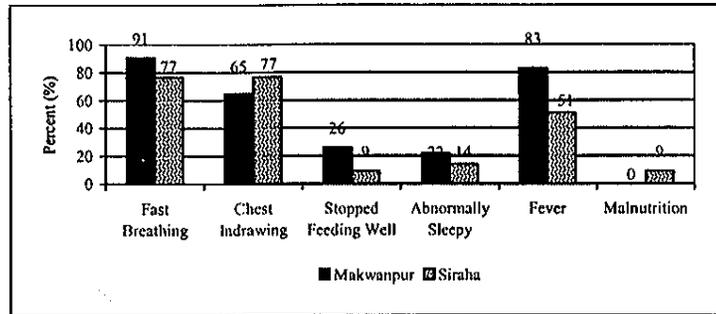
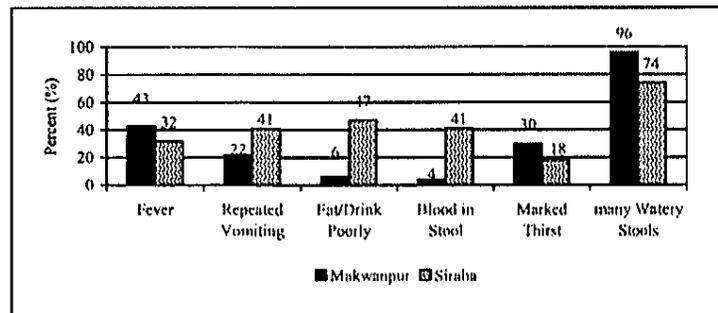


Table 16: Knowledge of diarrhea danger signs among mothers and MG members in Makwanpur and Siraha districts (multiple answer)

DANGER SIGN	MAKWANPUR	SIRAHA
Fever	10/23	11/34
Repeated Vomiting	5/23	14/34
Eat/Drink Poorly	6/23	16/34
Blood in Stool	1/23	14/34
Marked Thirst	7/23	6/34
Many Watery Stools	22/23	25/34

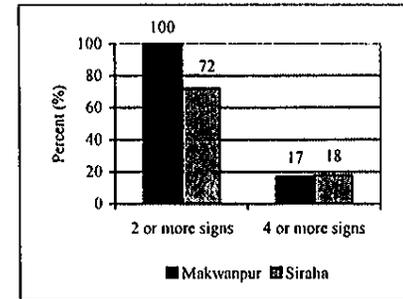
Knowledge of diarrhea danger signs was compared among mothers in Makwanpur district and MG members in Siraha district (Table 16 and Graph 33).

Graph 33: Knowledge of diarrhea danger signs among mothers and MG members in Makwanpur and Siraha districts (multiple answer)



Every mother in Makwanpur district and 72% of MG members in Siraha district knew at least 2 ARI danger signs, but very few know more than 4 signs (Graph 34). More mothers in Makwanpur than MG members in Siraha knew that fast breathing and fever were danger signs of ARI. It is essential that all of the danger signs be explained to and understood by mothers and MG members in both of these districts. Many mothers in Makwanpur district (74%) and MG members in Siraha district (69%) know at least 2 diarrhea danger signs, but few know at least 4 signs (Graph 35). These findings illustrate that all of the diarrhea danger signs must be emphasized in both districts since knowledge of them is low.

Graph 34: Knowledge of ARI danger signs among mothers in Makwanpur and MG members in Siraha



Graph 35: Knowledge of diarrhea danger signs among mothers in Makwanpur and MG members in Siraha

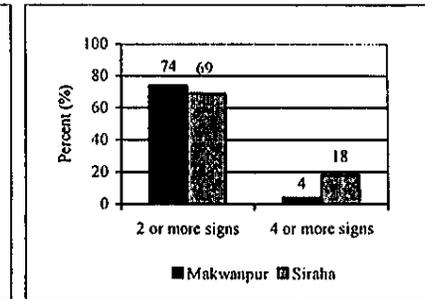


Table 17: Maternal, community leader, and MG member knowledge that FCHVs receive no salary

	MAKWANPUR		SIRAHA	
	COMMUNITY	MOTHERS	COMMUNITY	MG MEMBERS
Know No Salary	20/23	3/23	25/40	16/39
Do Not Know	3/23	20/23	15/40	23/39

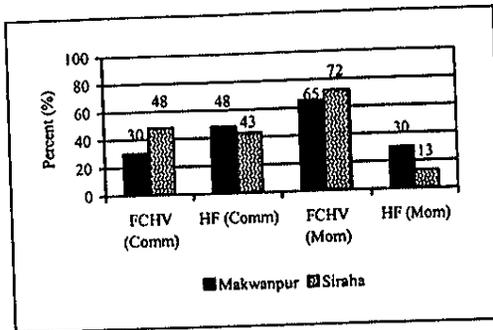
Table 17 shows community leaders' and mothers' or MG members' knowledge that FCHVs receive no salary for their work. A statistically significant difference was noted between community knowledge about FCHVs in Makwanpur compared with community leaders in Siraha ( $\alpha=0.05$ ). However, when maternal knowledge among mothers in Makwanpur district and MG members in Siraha district was analyzed, those who knew that FCHVs received no salary for their work was statistically higher among MG members in Siraha than mothers in Makwanpur ( $\alpha=0.05$ ). This may be explained by the fact that MGs were regularly held in Siraha district, whereas no regular meetings were held in Makwanpur. As a result it could be that MG members in Siraha have more contact with FCHVs and their activities than mothers in Makwanpur, who either visit the FCHV when their children are sick or for vitamin A distributions or polio dosing.

Table 18: Places where community leaders, mothers/MG members take sick children (single answer)

LOCATION	MAKWANPUR		SIRAHA	
	COMMUNITY	MOTHERS	COMMUNITY	MG MEMBERS
FCHV	7/23	15/23	19/40	28/39
HF	11/23	7/23	17/40	5/39

When the locations where community leaders and mothers in Makwanpur or MG members in Siraha districts chose to take sick children were compared, it was demonstrated that mothers or MG members in both districts preferred taking their child to an FCHV (Table 8) (Graph 36). This may be due to the fact that as women, they feel more comfortable seeking the advice and treatment of another woman. It may also be due to the fact that women are limited by the time and distance to a HF, therefore preferring to stay nearby and take their children to an FCHV.

Graph 36: Places where community leaders, mothers/MG members take sick children (single answer)



The percentage of FCHVs who had more than 20 cotrimoxazole tablets in Makwanpur and Siraha districts was determined (Graph 37). Seventy-eight percent (78%) of FCHVs in Makwanpur had at least 20 tablets, compared with 56% of FCHVs in Siraha. Therefore, cotrimoxazole availability is considerably lower in Siraha than Makwanpur district. This alludes to the need to improve FCHV accessibility to cotrimoxazole, so that all FCHVs can have an adequate supply of cotrimoxazole with them at all times.

Graph 37: Availability of more than 20 cotrimoxazole tablets with FCHVs in Makwanpur and Siraha

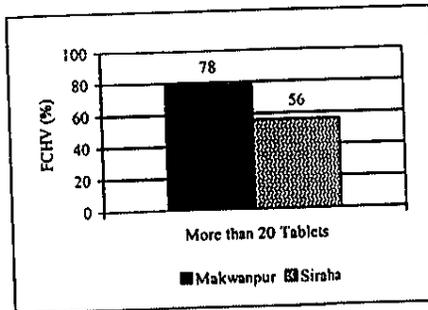
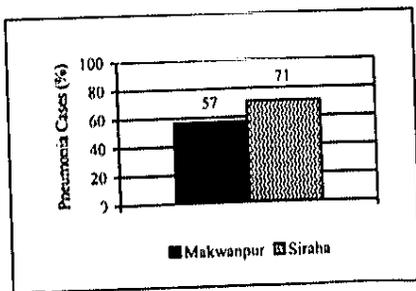
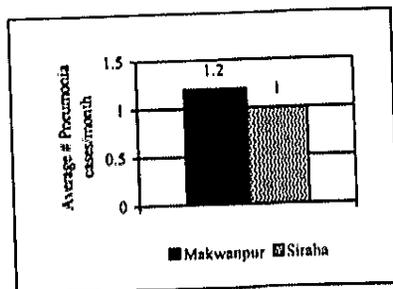


Figure 38 shows the percentage of FCHVs in Makwanpur and Siraha treating at least one pneumonia case in the three months preceding the study. It demonstrates that FCHVs in Siraha seem to be treating a larger percentage of pneumonia cases than FCHVs in Makwanpur district. Graph 39 depicts that the average number of pneumonia cases treated by each FCHV per month is similar among FCHVs in Makwanpur and FCHVs in Siraha districts.

Graph 38: Percentage of FCHVs treating at least one pneumonia case in the last three months



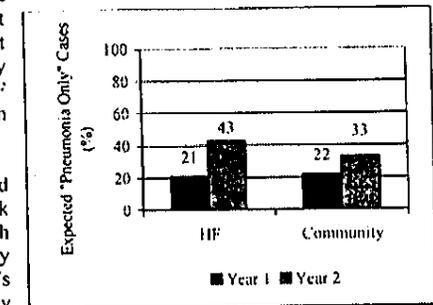
Graph 39: Average number of pneumonia cases treated by each FCHV per month



Evidence from Makwanpur and Siraha shows that as community awareness about the reason for charging for cotrimoxazole is increased, people are not as reluctant to pay for the drug. Charging local people for cotrimoxazole has many advantages. First, it enables the cost of the drug to be recovered, so external monetary sources are not needed to purchase the medication. Money is constantly being made available to purchase additional cotrimoxazole once the supply has been depleted. This benefits local people, since cotrimoxazole is available with FCHVs at the village level, and the community has access to the drug whenever needed. A third advantage that comes from charging for cotrimoxazole is that caretakers may have a greater appreciation for a drug that they have purchased. As a result they would be more likely to give their child the full course of the medication, and would therefore be inclined to value the drug and its ability to cure their child. "If people pay for the drug, they take the full course of treatment, are attentive and believe in the medicine," said FCHV Radha Khadka (Makwanpur district, Nibuwater VDC Ward #9). FCHV Sabitri Pudasaini (Makwanpur district, Bhainse VDC Ward #1) said "When people pay for the drug they believe it to be more valuable and effective." Community leader Sida Bahadur Pulami (Makwanpur district, Bhainse VDC Ward #3) also feels that charging community members for cotrimoxazole increases their belief in its ability to cure their children.

JSI monitoring data from the 2000/01 fiscal year shows that a higher percentage (43%) of expected "pneumonia only" cases in Siraha district are being treated at a HF than in the community (33%) (Graph 40). This may result from cotrimoxazole being available for free at HFs. Or, it may be that people are unable to pay for cotrimoxazole and must therefore go to a HF instead of getting treatment with an FCHV in their community.

Graph 40: Percentage of expected cases of pneumonia treated at HFs and in the community in Siraha



Cost recovery activities in both districts need appropriate resupply channels in order to work properly. In Makwanpur, FCHVs replenish their cotrimoxazole tablets at the monthly meetings at the HF in their VDC. These FCHVs therefore have a regular means by which they can resupply cotrimoxazole, and are further able to do so since HFs are located within their VDC. FCHVs in Siraha district experience difficulties in the resupply of cotrimoxazole since they must replenish their tablets from one of the ten authorized drug retailers located in different areas of the district (Annex 2). They must travel long distances to reach retailers, therefore making the resupply of cotrimoxazole difficult and irregular.

## Conclusions and Recommendations

Specific objectives on cost recovery and FCHV motivation and experience had been established prior to this study.

### Cost Recovery Objectives

a) determine the catalyzing factors for the start of the cost recovery strategies in each district

The catalyst for the initiation of cost recovery activities in Makwanpur was the visit from the Nuwakot district health team to Nibuwatar VDC in Makwanpur district. The cost recovery strategy in Nuwakot district is also linked partly to the initiation of cost recovery activities in Siraha district. The activities in Siraha were started as per an agreement from the Child Health section of the DPHO for SCF (US) to replicate the Nuwakot health model in the district.

b) determine the extent to which the desired cost recovery has been achieved in each district

It was not possible to determine the extent to which cost recovery had been achieved in Makwanpur and Siraha district, and therefore the second objective on cost recovery was not met. It is therefore recommended to conduct a further study aimed at determining the percentage of cost recovered in each district.

c) determine the level of effectiveness of each strategy

Many successes from the cost recovery activities were identified in Makwanpur and Siraha districts:

- The community was involved in making the programs sustainable
- There was an increased availability of cotrimoxazole at the village level, ensuring that a constant supply of the drug was maintained at this level
- There was increased motivation from the community to pay for cotrimoxazole as they become aware of the cost recovery strategy in their district, since they believe in the FCHV's ability to treat their children, and since they believe in the effectiveness of cotrimoxazole
- Achieving independence from external sources of aid for provision of such commodities as cotrimoxazole in both districts (and ORS packets and BPCs in Makwanpur)

Two main difficulties in how cost recovery activities were run were also identified, first in the resupply of cotrimoxazole among FCHVs in Siraha, and second in the level at which the activities have been implemented in Siraha. While FCHVs in Makwanpur resupply their cotrimoxazole tablets during regularly held monthly meetings at the HF in their VDC, FCHVs in Siraha must resupply cotrimoxazole from one of nine authorized drug retailers in the district. They often have very far to travel, and as a result experience difficulties in ensuring a constant supply of tablets with them at all times. In Siraha, FCHVs are actively involved in cost recovery activities since they charge the community for cotrimoxazole. However, these activities have not been implemented at the HF level and as a result FCHVs are placed in the position of having to explain to the community why they must buy cotrimoxazole with FCHVs but can get it free at HFs.

d) determine the opinions of district health staff, HF staff, community leaders, FCHVs and mothers

As a final cost recovery objective, opinions from various players involved in the cost recovery activities in each district were determined. Both Sr. DPHO Jagata Nanda Singh in Makwanpur and

DPHO/ARI Focal Person Ramesh Prasad Singh in Siraha felt confident and positive about the cost recovery activities in their districts. Every VDCC/VC, HF staff, community leader, and mother interviewed in Makwanpur expressed positive feelings about the cost recovery strategy. Every FCHV in Makwanpur, with the exception of one, felt good about being part of cost recovery activities, and mentioned having no difficulties in getting community members to pay for cotrimoxazole. They either convinced caretakers about the reason for charging for cotrimoxazole, or provided caretakers with cotrimoxazole on credit and then got the money on the third day follow up visit once the child was improving with cotrimoxazole treatment.

In Siraha district, 88% of FCHVs felt good about the cost recovery strategy, while the remaining 12% mentioned experiencing problems from the community about selling cotrimoxazole when it was available for free at HFs. Of the 88 treatment FCHVs interviewed in Siraha, 11 or 13% revealed that they were not treating pneumonia since community members refused to pay for the drug or because they lived close to a HF where community members were able to get cotrimoxazole for free. Problems in the way in which cost recovery activities were running were experienced by 25% of HF staff interviewed in Siraha. These included difficulties in getting the community to pay for cotrimoxazole and difficulties in FCHV accessibility for resupplying cotrimoxazole. It was also determined that knowledge about the cost recovery activities was low among VDCC/VC (47%) and community leaders (55%).

### FCHV Investigation

The FCHV investigation determined that FCHV motivation is based on their desire to serve their community, earn *Dharma* (spiritual gain), increase their own personal knowledge and their ability to pass on their knowledge to others in their community. The main personal changes experienced by FCHVs were increased community respect and recognition, greater confidence, and an increase in their own personal knowledge and skills. These personal changes are essential in helping FCHVs become empowered in their communities.

### Cost Recovery Strategies in Makwanpur and Siraha

The main differences in the cost recovery strategies occurring in Makwanpur and Siraha districts are the way in which they were started, and the level at which they are being implemented in each district. In Makwanpur, cost recovery activities were initiated after the ARI program had been well established in the district. As a result, mothers and other community members in the district had the knowledge and belief that FCHVs are able to treat pneumonia. They also understood and believed in the effectiveness of cotrimoxazole in curing their children who were sick with pneumonia. This could explain why they were not very reluctant to pay for a medication that they trusted, with an individual whose services and methods they were comfortable with and trusted. HFs and FCHVs in the VDCs in which cost recovery strategies were started all charge for cotrimoxazole. Therefore there is no discrepancy in these VDCs about having to buy cotrimoxazole.

In Siraha district both the CBAC program and cost recovery strategy started at the same time. Consequently community understanding of the role of FCHVs and the services that they are able to provide was not yet established. These community members had no basis for believing that cotrimoxazole really was an effective drug against pneumonia when they were asked to pay for it. As a result, community members were reluctant to pay for a drug that they are not familiar with, with an individual whom they are not sure can really treat pneumonia. In Siraha there is also a disparity as cotrimoxazole is provided free at HFs but FCHVs charge the community for the same medication. As a result, problems arise when people do not understand why they must pay for a medication at one location but can receive this same medication free at another location.

## Recommendations

### *Improve FCHV Access to Cotrimoxazole*

In order for FCHVs to treat pneumonia, they must have adequate supplies of cotrimoxazole with them at all times. In Siraha, increasing the number of drug retailers in the district, or having one drug retailer in each VDC, would greatly improve FCHVs' avenue to cotrimoxazole. Another way of improving FCHV accessibility to cotrimoxazole is to let FCHVs obtain the drug at HF, and to have HF staff or VDC members facilitate the procurement of cotrimoxazole from drug retailers.

### *Implement Cost Recovery Activities at HFs and Increase Awareness about Activities*

A major problem highlighted in Siraha district is the discrepancy between obtaining cotrimoxazole from FCHVs and HFs. Caretakers acquiring treatment for their children with FCHVs are required to purchase cotrimoxazole tablets, whereas caretakers obtaining treatment at HFs are only required to pay a Rs 2 ticketing charge to get cotrimoxazole. As a result local people do not understand why they are being charged for the drug at one location, but are able to get this same drug free at another location. If they do not understand, or have not heard about the cost recovery strategy to ensure that FCHVs have adequate supplies of cotrimoxazole with them, these individuals may feel anger towards FCHVs and feel that they are being cheated. In order to avert more difficulties in FCHVs obtaining payment from their patients, it is recommended that the cost recovery strategy be implemented in all HFs in Siraha district. Cotrimoxazole should be purchased for the same price at HFs, as with FCHVs. This will eliminate discrepancies and misunderstandings. In order for this to come into effect, VDCC/VC, HF staff, community leaders, mothers, and MG members should be made aware of the cost recovery strategy. They should understand why the strategy is in effect, the advantages of buying cotrimoxazole to ensure its availability year-round in the district, and that they will be charged for this drug everywhere in the district.

### *Conduct Regular MGMs and Emphasize the Need for Third Day Follow Up*

Regular MGMs are being held in Siraha district, but there have been very few MGMs in Makwanpur district. Therefore the need for regular MGMs must be stressed during future FCHV trainings in Makwanpur. Only 79% of mothers whose children were diagnosed with pneumonia and treated by an FCHV revealed following up with the FCHV on the third day. This is a very important step in verifying if the child is in fact



*An FCHV conducting a MGM in Kanchanpur district*

improving with cotrimoxazole treatment, and that they have not progressed to severe pneumonia. It is therefore recommended that the importance of third day follow up be emphasized at MGMs so that caretakers can understand that they must revisit the FCHV on the third day in order to ensure that their child is improving. Third day follow up of "pneumonia only" cases and of cases of "severe pneumonia" that FCHVs have referred to the nearest HF must also be emphasized at future FCHV training sessions.

### *Emphasize FCHV Activities, ARI and Diarrhea Danger Signs*

Knowledge among MG members that FCHVs diagnose and treat pneumonia, and manage diarrhea is not especially high in Makwanpur and Siraha districts. These two activities are very important in child health and survival, and should be emphasized at MGMs for future reference, should



members' children require treatment. Knowledge among MG members about family planning and health education activities conducted by FCHVs is also low, indicating that these topics must also be given priority as well as all of the other topics covered during MGMs. Also, all of the ARI and diarrhea danger signs should be emphasized during MGMs.

*An FCHV explaining the ARI danger signs during a MGM in Kanchanpur district*

### *Conduct Regular Supervision, Support and Recognition for FCHVs*

FCHVs provide numerous services geared to improving child health in Nepal. They not only dose children twice a year with oral polio and vitamin A capsules, but also provide appropriate home therapy advice to caretakers about preventing dehydration caused by diarrhea, and are able to diagnose and treat pneumonia in ARI program districts. FCHVs are active in counseling the community about family planning, immunization, childcare, first aid, and HIV/AIDS. FCHVs therefore provide their communities with valuable services and health information essential to saving children's lives. In order for these women to continue to use their personal time and energy to serve children in their community, they require supervision, support and recognition from the district, the health facility, and the community.

### Recommendations for a Future District

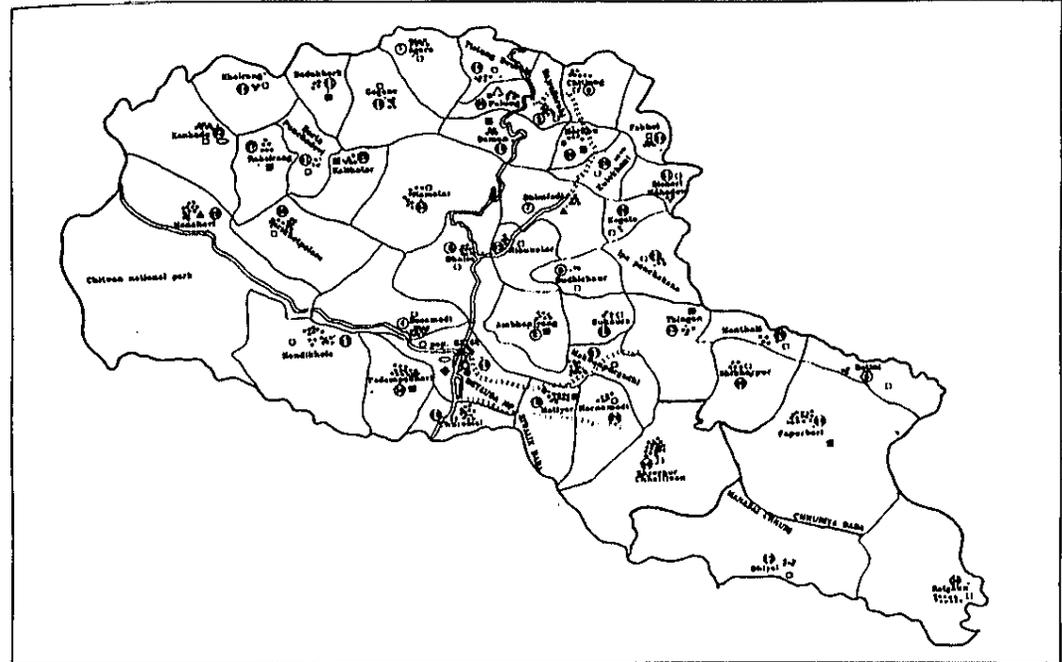
Recommendations for implementing similar cost recovery strategies in other districts follow. Findings from Makwanpur district show that a cost recovery strategy should be implemented a few years after the ARI program in the district. This would ensure community belief in the FCHV's ability to treat pneumonia, and belief in the effectiveness of cotrimoxazole to cure pneumonia. Community participation in both implementing and monitoring the strategy must be stressed. The strategy should be implemented district-wide (FCHVs and HFs charge for cotrimoxazole) for cost recovery objectives to be met, and in order to avert any discrepancies in where cotrimoxazole must be purchased. Drug retailers should be involved in supplying cotrimoxazole to HFs, while FCHVs should be allowed to replenish their supplies at the HF in their VDC.

In conclusion, Makwanpur and Siraha districts are undergoing efforts to continually make health a community responsibility through undertakings aimed at managing and maintaining health programs by way of the use of local resources. Cost recovery activities designed to cover the cost of cotrimoxazole in Makwanpur and Siraha (and the cost of ORS packets and BPCs in Makwanpur) allow communities to become independent from external aid sources for provision of these commodities. The current health programs in both districts are being sustained within the community using local resources, and cost recovery activities have resulted in a regular supply of cotrimoxazole tablets being made available at the village level. Finally they have heightened community awareness about ongoing cost recovery strategies in the districts and have increased community belief of FCHV services and the benefits of cotrimoxazole, resulting in enhanced community motivation to pay for the drug when needed. Implementing cost recovery activities requires time, motivation, determination and regular follow up, among other elements. Makwanpur and Siraha districts both show great understanding of these essential requirements as well as the ability to make cost recovery strategies in their districts a success.

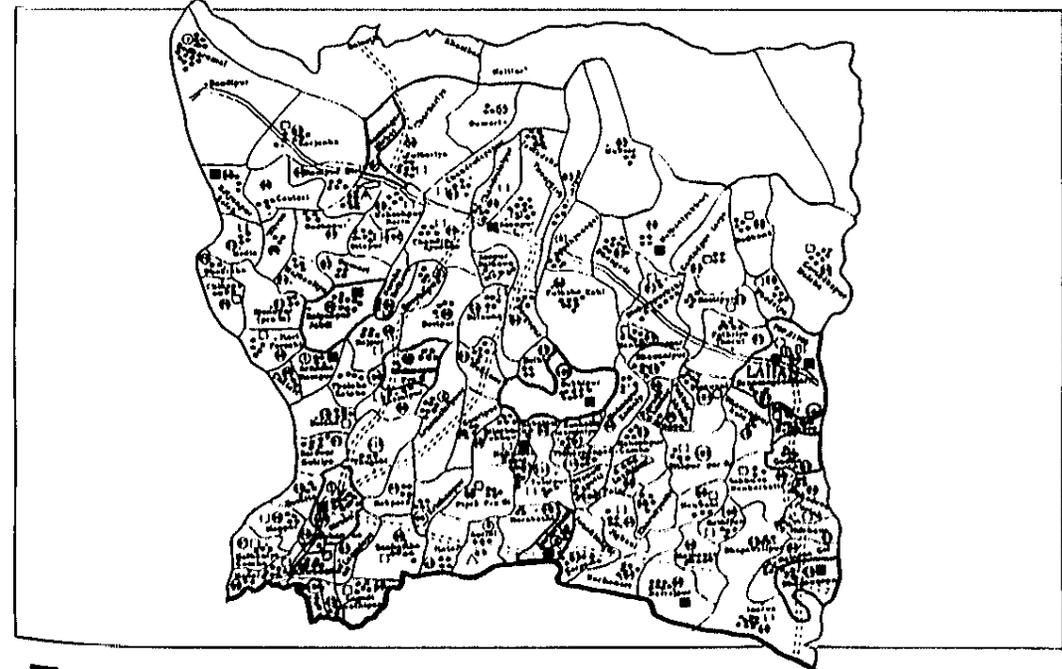
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Annex # 1: Map of Makawanpur District



Annex # 2: Map of Siraha District



□ Drug Retailers

○ VDCs Selected for Study

Annex #3: FCHVs interviewed in Makwanpur District

VDC	WARD NUMBER	FCHV
Nibuwatar	2	Champa Rana
	4	Kanchhi Maya Thing
	5	Bamala Lama
	6	San Nani B.K.
	7	Binda Lama
	9	Radha Khadka
	Bhainse	1
3		Padma Lama
6		Ful Maya Bion
Harnamadi	1	Yosoda Ghimire
	2	Rama Baiyya
	4	Durga Devi Baniya
	6	Sita Bnral
Daman	8	Dhana Maya Shrestha
	2	Madu Maya Tamang
	3	Sarala Bista
	4	Kanchhi Gopali
	6	Devaki Adhikari
Palung	7	Sapta Devi Pradhan
	9	Som Maya Bomjan
	1	Jagath Maya Pradan
	4	Kamala Karki
	5	Binda Dhakal

Annex #4: FCHVs interviewed in Siraha District

VDC	TREATMENT WARD	REFERRAL WARD
Sambhuda	Subhadra Devi Yadav	Janak Devi Yadab
	Radha Devi Yadav	Sukni Devi Yadab
	Pan Kumari Yadav	
	Santi Devi Shah	
Bismupur Pranam	Mamta Kumari Yadav	
	Malseri Devi Yadav	Sagar Devi Kamal
	Ranibati Devi Yadav	Ausha Devi Karna
	Phul Kumari Mahato	
	Sumitra Devi Yadav	
Sitorba Pehhaw	Sumita Devi Mandai	
	Rambati Devi Yadav	Ram Suneyar Devi Bal
	Mandira K Raut	Dayabati Thakur
	Bineswari Devi Yadav	
	Laxmi Chetri	
	Rani Rati Devi Sharma	
Sisawani	Upasi Devi Chaudhari	Sonabati Devi Yadab
	Hira Devi Yadav	Bhugani Chaudhari
Navrajpur	Laxman Chaudhari	
	Ina Devi Yadav	Binda Devi Kamet
	Jahari Devi Mandai	Paniya Devi Mandai
	Sabitri Devi Chaudhari	
	Parvati Devi Yadav	
Belha	Ram Kumari Yadav	
	Chandra Kala Devi Mahato	Pabitra Devi Shah
	Sita Devi Gareri	Phulo Devi Mahara
	Phul Kumari Devi Snu	
Caurari	Jagtarim Devi Purbe	
	Anita Panta	Rekha Devi Mandal
	Debu Jha	Molina Khatun
	Sonana Chaudhari	
	Manta Shah	
Sarswar	Jagataran Devi Mandal	
	Sakuntala Shrestha	Eklas Devi Yadab

	Suratiya Devi Yadav	Mank Mahara
	Kaali Devi Mandal	
	Bimala Sharma	
	Bhulur Devi Dhanuk Mandal	
Itari Parsahi	Kasam Devi Mandal	Asha Devi Jha
	Sanjatiya Devi Mandal	Santi Devi Mandal
	Rampari Mandal	
	Porbati Devi Yadav	
Dodhana	Eklas Mandal	
	Chandra Chaudhari	Domni Devi Chaudhari
	Koshita Devi B.C.	Niras Chudhari
	Kusum Devi Chaudhari	
Tulsipur	Kisini Devi Chaudhari	
	Bacchi Jha	Sunaina Devi Singh
	Chameli Devi Shah	Phulo Devi Shing
	Chandra Kala Devi Yadav	
Badhara Mal	Bima Devi Mahato	
	Lalita Pathak	
	Sumitra Pokhrel	Laxmi Lama
	Bechni Devi Baidha	Bhagabati Lama
Kalabajar Kalyanpur	Laxmi Rai	
	Maya Lama	
	Budhani Devi Mahara	
	Ganga Devi Mahato	Sonabati Mahato
Rampur Birta	Sobha Devi Yadav	Chandrakala Devi Mandel
	Gupta Maya Shrestha	Sukhuriya Devi Mandal
	Santa Sapkota	Dukani Devi Thakur
	Urmila Kumari Mahato	
Silepur	Kebal Devi Shih	
	Jidhari Devi Yadav	Pransila Yadab
	Rajkumari Yadav	
	Sobha Devi Jha	
Govindhapur	Rampyri Devi Mahato	
	Samatoliya Mandal	
	Sushila Dahal	Kamala Koirala
	Radha Devi Ray	Amriti Devi Mahato
Sukhipur	Sabitri Devi Yadav	
	Tila Rai	
	Anita Devi Mahato	Rajeswari Devi Shah
	Dulari Devi Shah	Mina Devi Gupta
Asepur Balkawa	Paryag Devi Chaudhari	
	Rani Bati Devi Yadav	
	Chandra Maya Yosha	
	Ajima Katun	Durga Devi Urnin
Chandralapur	Bina Devi Karna	Dana Devi Shah
	Sagar Devi Thakur	
	Han Laxmi Shrestha	Kaushalya Mahato
	Mutikala Palani	Rampriya Yadab
Khiraun	Mina Devi Sing	
	Chandra Kala Misra	
	Sonabati Devi Koiri	
	Urmila Devi Pasman	Gulab Devi Shah
	Jomani Devi Sao	Manni Devi Thakur
	Januna Devi Pasbaan	
	Rol Kumari Yndav	

### Empowered Female Community Health Volunteers Make a Difference



Bimala Lama is an illiterate Female Community Health Volunteer (FCHV) in Ward #5 of Nibuwatar VDC in the hills of Makwanpur district. Nibuwatar SHIP staff and VDC members are very supportive of their FCHVs, giving them Rs 75 per monthly meeting that they attend. This VDC is the first of currently 8 VDCs to start an informal, semi-spontaneous cost recovery strategy to make cotrimoxazole, a very effective drug for treating pneumonia, continually available with FCHVs.

In June 1999 a health team from Nuwakot district came on an exchange visit to Makwanpur, meeting with Nibuwatar SHIP staff, community leaders and FCHVs. Through an initiative by Save the Children (SCF US), Nuwakot FCHVs charge Rs 12 for 20 cotrimoxazole tablets and Rs 18 for 30 cotrimoxazole tablets. The Nuwakot team departed Nibuwatar VDC with one question: "Are you willing to let your children die from pneumonia if cotrimoxazole is not available?"

In response to this visit, a similar cost recovery strategy was started seven months later in Nibuwatar VDC. As part of this strategy, each FCHV keeps a monthly report with the amount of cotrimoxazole sold, the amount of cotrimoxazole given on credit, and the amount of cotrimoxazole remaining with them. They submit the monthly report to the Nibuwatar SHIP along with the money they receive from sales, and are resupplied with enough cotrimoxazole tablets to ensure that they have 100 tablets. Cost recovery activities in Nibuwatar VDC have spurred the initiation of similar activities in other VDCs of Makwanpur district.

Bimala Lama is a strong believer in the cost recovery strategy. "Until now donor agencies have been providing us with cotrimoxazole. What will happen once they stop? We cannot depend on others for the rest of our lifetime. We have to stand on our own." She feels that community members have been accepting the fact that they must pay for cotrimoxazole. They realize that they can either travel 45 minutes by bus to Hetauda for expensive medication, or walk a short distance to her home to buy an effective medication at a much cheaper price. Bimala Lama says that she has had no problems getting caretakers to pay for cotrimoxazole. If they do not have money with them she gives them the cotrimoxazole on credit and gets the money when they return to her with the child on the third day for a follow up visit.

When asked why she continues her work as an FCHV when she receives no payment for her services, Bimala Lama replied that it is her way of serving her community, by saving the lives of children. She says that since becoming an FCHV she is not shy to stand up and speak in front of others, and that she is respected by the community because of her work. Some people bring vegetables to her home, and others say "Namaste" to her when they see her on the road because she treats their children. Respect is a two-way process between the community and myself. I respect the community and now the community respects me."



Bimala Lama feels that as an FCHV she has improved community members' knowledge about pneumonia and diarrhea. Her monthly Mothers' Group Meetings (MGMs) focus on pneumonia and ARI during the winter, and diarrhea during the summer, among other topics. She says that she has seen fewer cases of pneumonia and severe pneumonia among children in her community since the ARI program began.

At the time she was interviewed, Bimala Lama had 130 cotrimoxazole tablets and 2 packets of oral rehydration salts (ORS) with her. She had treated two cases of pneumonia and had seen no cases of severe pneumonia in the three months preceding the interview. "If I go to the temple and pray, I will not earn Dharma. But if I serve my community, then I earn Dharma."