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Assessment of
Dhami/Jhankri Orientation

A Study Conducted by JSI/Nepal
in Makwanpur and Jhapa
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Abbreviations

ACHFO	-	Assistant Child Health Field Officer
ARI	-	Acute Respiratory Infection
AHW	-	Auxiliary Health Worker
BF	-	Breast Feeding
CDD	-	Control of Diarrheal Diseases
CHD	-	Child Health Division
CHFO	-	Child Health Field Officer
CI/FB	-	Chest Indrawing/Fast Breathing
DHO	-	District Health Office/Officer
D/J	-	<i>Dhami/Jhankri</i> (traditional healer)
DPHO	-	District Public Health Officer
EPI	-	Expanded Program on Immunization
FCHV	-	Female Community Health Volunteer
HF	-	Health Facility
HT	-	Home Therapy
JSI	-	John Snow Incorporated
MCHW	-	Maternal Child Health Worker
MOH	-	Ministry of Health
NCDDP	-	National Control of Diarrheal Diseases Program
NGO	-	Non-Governmental Organization
ORS	-	Oral Rehydration Solution/Salt
SCF	-	Save the Children Fund
UK	-	United Kingdom
UNICEF	-	United Nations Children's Fund
UVM	-	University of Vermont
VDC	-	Village Development Committee
WHO	-	World Health Organization
VHW	-	Village Health Worker

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Executive Summary

Diarrhea and acute respiratory infections, particularly pneumonia, continue to be the major causes of morbidity and mortality in children under the age of five in Nepal. In order to take treatment of pneumonia cases closer to the community, in 1995, the Ministry of Health launched a program to train Female Community Health Volunteers (FCHVs) on the treatment and/or referral of pneumonia cases in four districts of Nepal. An assessment of this program in 1997 revealed that, in addition to the FCHVs, traditional healers, or *dhami/jhankris* (D/Js), play an important role in the treatment of cases of pneumonia in the community. Based on the recommendations of this evaluation, in 1997/98, CDD/ARI Section, MOH, in collaboration with UNICEF, WHO, and JSI/USAID, conducted an orientation for D/Js. *Dhami/Jhankris* from six districts in Nepal, Jhapa, Morang, Sunsari, Parsa, Makwanpur and Chitwan were oriented to recognize the referral signs of ARI and diarrhea, and to learn about home therapies for both diseases.

This study is an evaluation of the effectiveness of the D/J orientation in two districts, Makwanpur and Jhapa, 14 months after its implementation. A total of 144 interviews were conducted with both oriented and non-oriented D/Js. Forty-five of the 105 originally oriented D/Js from Makwanpur and 33 of the 76 from Jhapa were randomly selected for interview. Thirty-five non-oriented D/Js were interviewed in Makwanpur and 31 in Jhapa. The interviews were conducted primarily to compare the knowledge and practice of the oriented D/Js, pre- and post- orientation, as well as to compare the oriented and non-oriented D/Js. The assessment included questions about the D/Js' knowledge and practice in regard to the referral signs of ARI and dehydration, danger signs of ARI and diarrhea, ability to correctly prepare Oral Rehydration Solution, and knowledge about home therapies for these diseases. Comparisons were also made between the D/Js of Makwanpur and Jhapa, and between literate and illiterate D/Js. Health facility staff were interviewed in both districts to get their impressions of the effectiveness of the orientation. Finally, caretakers of children with ARI and/or diarrhea who had visited an oriented D/J within the two weeks prior to the study were interviewed with the intent of documenting the oriented D/Js' management of these diseases.

A total of six Village Health Workers and one Auxiliary Health Worker were trained as interviewers for the two districts. JSI staff and the study co-ordinator carried out supervision of the interviewers. Interviews were conducted using a standardized questionnaire which was written in Nepali and field tested in Makwanpur.

The primary objective of the orientation was to educate the D/Js about ARI and diarrheal disease to the extent that they would learn when to make referrals to the FCHVs or health facilities when necessary. Ninety-six percent of the oriented D/Js stated that they referred ARI cases to the health facilities after receiving the orientation, whereas only 35% of them reported referring prior to receiving orientation. The non-oriented D/Js' referral rate was 44%. These results indicate that the orientation program had a positive impact on the D/Js' treatment pattern.

The oriented D/Js' knowledge about home therapies for ARI was better than that of the non-oriented D/Js. Thirty-three percent of the oriented D/Js advised home therapy for their cough and cold (no pneumonia) patients, whereas 20% of non-oriented D/Js advised home therapy. Although a slightly higher percentage of oriented D/Js recognized the danger signs of ARI, ("fast

breathing", "chest indrawing", "fever", "malnutrition", "unable to eat/drink", and "difficulty in waking up"), knowledge about these danger signs was overall poor among both oriented and non-oriented D/Js. One reason for the poor recall among the oriented D/Js could be that the ARI orientation was not of long enough duration. This finding suggests that future orientations may need to be longer and that refresher courses and study aids may be necessary.

A higher percentage of oriented D/Js recognized all six of the signs of dehydration, ("general condition", "tears", "thirst", "skin elasticity", "sunken eyes", and "dry mouth and tongue"), compared to the non-oriented D/Js. The oriented D/Js had an overall better knowledge of the seven referral signs for diarrhea, ("frequent watery stools", "repeated vomiting", "marked thirst", "unable to eat/drink", "fever", "blood in stool", and "child not getting better"), however, both groups performed poorly in the categories of "unable to eat/drink" and "fever". Finally, the oriented D/Js had better knowledge about the three home rules for treating diarrhea, ("increase fluids", "continue feeding", and "knows at least one reason for referral"). Future orientations clearly need to place more emphasis on some aspects of diarrheal disease.

When comparing the two districts, the D/Js of Makwanpur had better knowledge about the danger signs of ARI, ARI home therapies, and the signs of dehydration. This may be attributed to the ARI Strengthening Program which has existed longer in Makwanpur than in Jhapa. In addition, Makwanpur has had the benefit of the CDD Reactivation Program since 1996/1997. The CDD Reactivation Program, which reached the community level, is a combined child health program which includes diarrhea, ARI, nutrition, vitamin A, and Expanded Program on Immunization (EPI) as its components. Therefore, the health facility staff in Makwanpur may have been better prepared to orient the D/Js in comparison to those in Jhapa. The ability of both oriented and non-oriented D/Js to correctly prepare ORS (Oral Rehydration Solution/Salt) was poor in both Makwanpur and Jhapa, (46% and 28%, respectively).

A higher percentage of literate D/Js recognized the danger signs of ARI and dehydration, knew about ARI home therapies, and were able to demonstrate the correct preparation of ORS. These findings indicate that the literate D/Js may be more capable of learning about ARI and diarrheal disease by the methods employed during the orientations. In light of these results, future orientations should be tailored to meet the educational requirements of the illiterate D/Js.

In order for the D/J referral process to be successful, the D/Js need to know the FCHV of their ward and be aware of her treatment of childhood pneumonia and diarrheal disease. A higher percentage (81%) of oriented D/Js knew the FCHV of their ward, as compared to non-oriented D/Js (58%). Of those who knew their FCHV, more oriented D/Js also knew of her treatment of pneumonia. A comparison of the two districts showed that in Makwanpur, where the ARI Strengthening Program has been in existence longer than in Jhapa, a higher percentage of D/Js knew the FCHV of their ward and her treatment of pneumonia.

Although the results of this study indicate that the ARI orientation was effective in improving the D/Js' knowledge, skills and practice in assessment and treatment of cases of ARI and

diarrhea, there are several aspects of the program which require improvement. Based on the findings of this study, the following recommendations are proposed:

- Target and reinforce specific messages in future orientations.
- Improve the linkage between the *dhamiljhankris* and the FCHVs.
- Develop new ways to orient illiterate *dhamiljhankris*.
- Utilize experienced trainers.
- Increase the duration and frequency of subsequent orientations for *dhamiljhankris*

Results of this study are encouraging in that they show the ARI orientation had a positive effect on the D/J's knowledge about ARI and diarrheal diseases. Referral of ARI cases by the D/J's to the health facilities increased after the orientation, which was the primary objective of the orientation. *Dhami/Jhankris*, without question, play an important role promoting the health of the community because many villagers place a great amount of faith and trust in their treatments. In addition, the D/J's seemed eager to learn current medical practices. Therefore, the D/J's should not be alienated, but rather included in the future health plans of Nepal.

1. Introduction

Nepal's landscape ranges from the flat lands of the *Terai*, near sea level, up to the highest peak in the world, Mount Everest. Eighty percent of Nepal's landmass consists of hills and mountains, much of which remains inaccessible by road. For this reason, many of Nepal's villagers still live in isolation. This has deprived them, among other things, of modern health care facilities.

The government has attempted to provide health services to the population through district hospitals, primary health centers, health posts, and sub-health posts in each district, and the number of facilities has greatly increased under the current health plan (Ministry of Health, 1-3). However, the absence of health facility staff at some locations, long walking distances to the health facilities (HF), lack of adequate medicine and equipment, and opening hours which are often inconvenient for the villagers all contribute to underutilization of these facilities. In addition, many villagers' cultural beliefs are not in concordance with the western medical treatments provided by the health facilities.

Using traditional healers during illness is a practice that has been occurring for centuries in many countries of the world and Nepal is no exception. Faith in traditional shamanic healers, *dhamis* and *jhankris*, is deeply rooted in the minds of many people in Nepal (particularly in rural areas), and is reinforced by previous positive experiences in which traditional healers have treated illness. Therefore, villagers continue to visit these traditional healers. A study done by Save the Children Fund/UK on the training of *dhamis* and *jhankris* revealed that in rural areas, many people first consult the traditional healers and seek medical services only during the later stages of the illness (Save the Children, 1997).

Traditional healers take into account the physical, mental and spiritual aspects of illness. They believe that powerful, invisible forces come into our world which bring sickness and misfortune. It is believed that traditional healers, unlike ordinary men, have the ability to communicate with these forces and negotiate their exit from our world (Miller, 1997). Their treatments are aimed at restoring balance between the mind and body (Bodeker, 1994).

It is difficult to distinguish between the *dhamis* and *jhankris* because their practices differ from one individual to another and there is no uniform training or apprenticeship (Dhakal, et al, 1986). For the purposes of this study, no such distinction is made and anyone carrying out blowing (*phukphak*), beating drums or chanting is considered a *dhami/jhankri* (D/J).

The two major contributors to childhood mortality under the age of five in Nepal are pneumonia and diarrhea. In 1987, the MOH launched the Acute Respiratory Infections (ARI) Control Program in coordination with the National Control of Diarrheal Disease Program (NCDDP), which was established in 1983. In 1993, the NCDDP initiated a CDD Reactivation Program, a new initiative to strengthen case treatment for diarrhea and improve availability and correct utilization of Oral Rehydration Solution (ORS). This program was initiated in Jhapa in 1993 and included health facility level staff. In the later expansion of this program, which included Makwanpur in 1996/97, the inputs were extended to include community level workers such as village health workers (VHW), maternal child health workers (MCHW), and female community health volunteers (FCHV), (Dr. Penny Dawson, 4-5).

In 1995, the MOH launched the ARI Strengthening Program. This community based intervention program trains FCHVs to diagnose and treat, or refer cases of pneumonia in children under five years of age. In 1997, the CDD/ARI Section of the Child Health Division, MOH in collaboration with JSI/USAID, UNICEF, and WHO carried out an assessment of this program. The assessment revealed that in Chitwan, where the FCHVs had been trained to diagnose and treat cases of pneumonia, 43% of children's caretakers reported that they also like to consult traditional healers, or D/Js, when their children had ARI. In Morang, where the FCHVs were taught to refer ARI patients to the health facilities, 61% of the caretakers reported that they also like to consult traditional healers (Assessment of the ARI Strengthening Program, 1997).

After the assessment, it was decided that D/Js should be given the necessary knowledge and skills to differentiate between those cases of pneumonia and diarrhea which require referral, and those which could be treated at home. This would enable the D/Js to recognize the danger signs of ARI and diarrheal dehydration, and to make timely referrals of ARI patients to HF's and FCHVs in order to prevent unnecessary deaths. The D/Js would also be oriented about the role of the FCHV and HF in providing treatment for pneumonia and dehydration.

In 2054/2055 (1997/98), CDD/ARI Section, MOH, in collaboration with UNICEF, WHO, and JSI/USAID provided an ARI orientation for D/Js in the six districts of Jhapa, Makwanpur, Chitwan, Morang, Sunsari, and Parsa, and an additional five districts, in 2055/56 (1998/99), (Bajura, Rasuwa, Siraha, Bara, Rautahat (see Annex 1). The D/Js were selected based on the criterion that they mainly treated children under the age of five. The D/Js were given a three hour orientation, the content of which included: definition of ARI, the signs and symptoms of the common cold and pneumonia, conditions for referral to FCHVs or HF's, home therapies for ARI, the signs of dehydration and the correct preparation of ORS (see Annex 2).

More than a year after providing of the D/J orientation, a follow-up study was designed to assess its impact on the practices of the D/Js. From the six districts where the ARI orientation had been conducted, Makwanpur, in the mid-hills region, and Jhapa, in the *Terai*, were selected for review because of their different geographic regions and ethnic composition.

Field Sites

Makwanpur is in the central development region and its headquarters is in Hetauda. Its elevation ranges from 305 to 2743 meters above sea level. It is primarily a hill district and in some areas is very remote and inaccessible by road. The total population is 314,599 with a literacy rate of 37.15%. The total number of households is 56,091 with an average household size of 5.6. (Statistical Pocket Book of Nepal, 1996).

▼ *Mel Bahadur Thing, a D/J of Makwanpur, with his drum*





▲ *Panchkatu Ganesh, a D/J of Jhapa*

Jhapa lies in the eastern development region and its headquarters is in Bhadrapur. Its elevation ranges from 125 to 381 meters above sea level with *Terai* being its major topographical feature. The total population is 593,737 with a literacy rate of 57.3%. The total number of households is 293,791, with an average household size of 5.4. (Statistical Pocket Book of Nepal, 1996).

2. Objectives

- i. To evaluate the impact of the ARI orientation provided to the *dhami/jhankris* in Makwanpur and Jhapa.
- ii. To assess the gap between knowledge and practice of the oriented *dhami/jhankris*.
- iii. To examine the differences in knowledge and practice between the oriented and non-oriented *dhami/jhankris*.
- iv. To document how oriented *dhami/jhankris* managed ARI and/or diarrheal disease through interviews of the caretakers of children who had recently been treated by the oriented *dhamis/jhankris*.
- v. To observe the practices of the oriented *dhami/jhankris* during treatment of ARI and diarrhea cases.

3. Methodology

3.1. Dhami/Jhankri Selection

The oriented D/J's to be interviewed in Makwanpur and Jhapa were randomly selected for each district at the JSI office in Kathmandu. A numbered list was made of the oriented D/J's in each district. The numbers were written on separate slips of paper and then randomly selected from a container. A total of eighty oriented D/J's were selected. Forty-five of the D/J's were selected from the 105 oriented in Makwanpur and thirty-five from the 76 oriented in Jhapa (See Annex 3). The non-oriented D/J's were chosen at the time of the field site visits by asking local individuals. All of the D/J's interviewed were male.

3.2. Interviewer Selection

Four interviewers were selected in Makwanpur and three in Jhapa. The JSI field officers in Hetauda and Biratnagar, in consultation with the respective District Public Health Officers, chose the interviewers. They were selected based on the extent of their knowledge about ARI and CDD. All were government staff working in the health facilities.

3.3. Questionnaire Development

Questionnaires were developed at the JSI office in Kathmandu, originally written in Nepali and later translated into English. The D/J's' questionnaire was used for both oriented and non-oriented D/J's, with inappropriate questions omitted for the non-oriented ones. It was designed with the following objectives in mind: 1) document the D/J's' perceived effectiveness of the orientation, 2) to determine the impact that the orientation had on the D/J's' treatment of ARI and diarrheal disease, 3) to compare the effectiveness of the orientation between the two study districts, and 4) evaluate the potential impact of literacy status on the D/J's' ability to benefit from the orientation as it was given. Most of the questions were unprompted. However, some of the questions were prompted in that the oriented D/J's were shown ARI classification and home therapy cards. The D/J's were also asked to demonstrate the preparation of ORS if they claimed to know how to do so.

An additional questionnaire was developed for caretakers of children who had been treated for ARI or diarrheal disease by oriented D/J's within the two weeks prior to the study. The intent of this questionnaire was to document how the oriented D/J's managed ARI and diarrhea and to get the caretakers' impressions on the D/J's treatment(s).

Another questionnaire was developed for interviewing health facility staff in order to help determine the effectiveness of the ARI orientation. (See Annex 4)

3.4. General Overview of Orientation for Interviewers

A two-day orientation was held at the JSI field office in Hetauda for the interviewers in Makwanpur, and at the JSI field office in Biratnagar for the interviewers in Jhapa. On the first day of the orientation, the interviewers were informed about the content of the D/Js' ARI orientation. The questionnaires were discussed in detail and proper administration was reviewed. A role-play was performed between two volunteers during which one acted as a D/J and the other as the interviewer. The purposes of the role-play were to practice interviewing skills, and to learn how to handle problems that the interviewers could potentially encounter in the field. On the second day, the interviewers practiced using the questionnaire in the field with oriented D/Js who were not included in the study. In addition, the D/J questionnaire was pre-tested in the field and modified as required.

The interviewers were instructed that if the oriented D/J who was selected for the study could not be located in the ward (the smallest administrative unit of a Village Development Committee (VDC)), another oriented D/J in the closest ward of the same VDC was to be interviewed. If this D/J also couldn't be located, then the interviewers were instructed to locate an oriented D/J in the adjacent VDC.

3.4.1. Makwanpur Orientation of Interviewers

In Makwanpur, three Village Health Workers (VHWs) and 1 Auxiliary Health Worker (AHW) conducted the interviews. General orientation was conducted as described above. After the questionnaires were discussed on the first day of the orientation, necessary modifications were made. On the second day of the orientation, the interviewers were divided into groups of two, and, accompanied by JSI field staff, the D/J questionnaire was pre-tested in the field. As per the results of the pre-test, final revisions were made to the D/J questionnaire.

3.4.2. Jhapa Orientation of Interviewers

In Jhapa, there were three interviewers, all of whom were VHWs. General orientation was conducted as described above in section 3.4 in Biratnagar in the district of Morang. On the second day of the orientation, the three interviewers split into two groups, each with JSI supervision, and pre-tested the D/J questionnaire in the villages of the Sunsari district. Following the pre-test, necessary revisions were made to the questionnaire.



▲ Interview team in Jhapa from left to right are Hira Tiwari, Bhuvan Upreti, Upendra Pokharel, Rudra Khatiwada, Ek Raj Bhandari, Indira Srivastava and Rajendra Karki

3.5. Field Activities

The interviewers looked first for the randomly selected oriented D/J and then a non-oriented D/J. The interviews were conducted first, after which the D/J was asked if he knew how to prepare ORS. If he responded positively, he was asked to prepare it. The volume of water used for ORS preparation was measured using a calibrated cylinder. After the interview was over, the D/J was provided with feedback regarding incorrect answers. If necessary, the interviewer demonstrated the correct preparation of ORS.

At the end of the interview, the interviewer thanked the D/J. In recognition of the time the D/J gave for the study, he was given a blue plastic cup (for measuring the correct volume of water for ORS preparation), a packet of ORS, and a mother's booklet (a pictorial informational booklet about diarrhea, pneumonia, the Expanded Program on Immunization (EPI), and nutritional topics).

Following the D/J interviews, health facility workers were located, if possible, and interviewed. Finally, if any children under five had been treated by the oriented D/J for ARI or diarrhea within the two weeks prior, an attempt was made to locate the caretakers of these children for interview.

A total of 80 D/Js were interviewed in Makwanpur; 45 oriented and 35 non-oriented. In Jhapa, 64 D/Js were interviewed; 33 oriented and 31 non-oriented. Twelve health facility in-charges were interviewed in Makwanpur and four in Jhapa. Four caretakers of children with ARI and/or diarrhea were also interviewed.

3.6. Data Analysis

Data from the *dhami/jhankri* questionnaires were coded and analyzed at the JSI office in Kathmandu using Microsoft ACCESS software. Because there were only 16 interviews with health facility staff, these results were tabulated manually. The four interviews with caretakers were documented as case studies. There was only one observation of an oriented D/J conducting treatment and this information was therefore discarded.

3.7. Photo Consent

A verbal photo consent from each D/J was obtained before pictures were taken.

3.8. Limitations of the Study

Fourteen of the selected oriented D/Js could not be found. They had either migrated to another part of the country, or the villagers could not recognize their names. Two of the oriented D/Js died prior to this study. A few of the D/Js were not actively practicing and were therefore not ideal subjects. Because there was only one observation of an oriented D/J conducting treatment, objectives (ii.) and (v.) could not be fulfilled. Because the D/Js do not keep records and because limited time was spent with each D/J, it could not be ascertained as to whether or not the information they provided was accurate.

4. Findings and Discussion

4.1. Characteristics of the *Dhami/Jhankris*

Table 1: *Dhami/Jhankri's* Orientation Status

District	No. of Interviews (n)	Oriented	Non-oriented
Makwanpur	80	45 (56%)	35 (44%)
Jhapa	64	33 (52%)	31 (48%)
Total	144	78 (54%)	66 (46%)

A total of 144 D/J's were interviewed in the two study districts. Of the 80 D/J's interviewed in Makwanpur, 56% were oriented and 44% were non-oriented. In Jhapa, a total of 64 D/J's were interviewed; 52% oriented and 48% non-oriented.

Table 2: *Dhami/Jhankri's* Literacy Status

District	No. of Interviews (n)	Literate	Illiterate
Makwanpur	80	32 (40%)	48 (60%)
Jhapa	64	48 (75%)	16 (25%)
Total	144	80 (56%)	64 (44%)

For the purposes of this study, a D/J was designated as being literate if he was able to read the training materials to the interviewer. Table 2 reveals that 40% of the D/J's from Makwanpur and 75% from Jhapa were literate.

Table 3: Age Range of the *Dhami/Jhankris*

District	No. of Interviews (n)	<40 Years	40-60 Years	>60 Years
Makwanpur	80	11 (14%)	44 (55%)	25 (31%)
Jhapa	64	3 (5%)	49 (76%)	12 (18%)
Total	144	14 (10%)	93 (64%)	37 (26%)

The age range of the D/J's who were interviewed was 27 to 86 years. Both in Makwanpur and Jhapa, a larger proportion of the D/J's were between the ages of 40-60, (55% in Makwanpur and 76% in Jhapa). Age seems to have played an important role in the effectiveness of the orientation, because it was found that many of the oriented D/J's over the age of 60 could not remember what they were taught during the orientation. In addition, some of the older D/J's had problems with their eyesight which may have limited their ability to benefit from the orientation as it was presented.

When the D/Js were asked how many years they had been practicing, the answer ranged from 2 to 72 years. There was little difference between the D/Js of the two districts in this respect.

Table 4: Factors of Motivation to Become a *Dhami/Jhankri*

Motivation	Makwanpur (n=80)	Jhapa (n=64)	Total (N=144)
Ancestral	37 (46%)	14 (22%)	51 (35%)
Family Member	10 (13%)	21 (33%)	31 (22%)
Another D/J	25 (31%)	17 (27%)	42 (29%)
Self	7 (9%)	12 (19%)	19 (13%)
Through Dream	5 (6%)	5 (8%)	10 (7%)
Other	4 (5%)	4 (6%)	8 (6%)

In Makwanpur, the largest proportion of D/Js, 46%, stated that they became a traditional healer because their forefathers had handed down the practice through generations. In Jhapa, the largest proportion, 33%, stated that a family member motivated them to become a D/J. When D/Js learn the rights and rituals from their father or grandfather (ancestral), it is usually at an early age. The practices therefore become ingrained and are difficult to effect by a three-hour orientation. This may be one reason why many D/Js did not adopt the concepts and practices that were taught during the ARI orientation.

4.2. Characteristics of Patients of the *Dhami/Jhankris*

Table 5: Age Groups Most Frequently Treated by the *Dhami/Jhankris*

Age Groups	Makwanpur (n=80)	Jhapa (n=64)	Total (N=144)
0-5 Years	73 (91%)	49 (77%)	122 (85%)
5-15 years	2 (3.5%)	6 (9%)	8 (6%)
15-40 Years	2 (3.5%)	3 (5%)	5 (3%)
>40 Years	0 (0%)	4 (6%)	4 (3%)
All Ages	3 (4%)	2 (3%)	5 (3%)

The main criterion for selecting a D/J for orientation was that they treated a substantial number of children under the age of five. In the present study, the D/Js were asked if they still treated this age group. Ninety-one percent of the oriented D/Js in Makwanpur most commonly received patients 0-5 years old, and in Jhapa, 77% most commonly received patients of this age group. Of the total of 144 D/Js interviewed, 85% stated they received patients primarily within this age group. These results confirm that the majority of the oriented D/Js were still treating children under five.

Table 6: Diseases of Children under Five Most Commonly Seen by Dhami/Jhankris by District

Diseases	Makwanpur (n=80)	Jhapa (n=64)	Total (N=144)
ARI	60 (75%)	40 (63%)	100 (69%)
Diarrhea	72 (90%)	39 (61%)	111 (77%)
Malnutrition	6 (8%)	4 (6%)	10 (7%)
Other	62 (78%)	48 (75%)	110 (76%)



▲ *Sukra Bahadur Praja, a D/J of Bhark VDC, Makwanpur with his client*

Table 6 depicts the types of diseases that the D/Js most commonly saw in children under the age of five. The D/Js often gave more than one answer to this question. Ninety percent of the D/Js in Makwanpur saw patients with diarrhea, 78% saw "other" cases, and 75% saw cases of ARI. In Jhapa, 75% saw diseases other than ARI and diarrhea, but they also received a large percentage of ARI (63%) and diarrhea patients (61%). "Other" diseases included fever, snake bites, diseases caused by spirits and

witches, etc. Overall, the D/Js reported diarrhea as being the most common disease seen (77%). "Other" ailments were seen with nearly the same frequency (76%).

The D/Js were also asked to estimate the number of cases of childhood ARI and diarrhea they saw in one month. The maximum number of reported diarrhea and ARI cases a D/J treated in a month was 235. However, there was no way to verify the D/Js' numbers because they do not keep any written records.

Table 7: Diseases of Children under Five Most Commonly Seen by Dhami/Jhankris by Orientation Status

Diseases	Oriented (n=78)	Non-oriented (N=66)
ARI	64 (82%)	36 (55%)
Diarrhea	62 (79%)	49 (74%)
Malnutrition	6 (8%)	4 (6%)
Other	61 (78%)	49 (74%)

Table 7 compares the oriented and non-oriented D/Js by the diseases they most often saw in children under five. The oriented D/Js claimed to have seen a higher percentage of ARI cases (82%) than the non-oriented D/Js (55%). This could be due to the oriented D/Js' better

understanding of the criteria needed to recognize ARI as a result of the orientation program. There was not a large difference between the percentages of diarrhea cases seen by each group.

Table 8: Walking Distance (Time) from Dhami/Jhankris' Homes to the Health Facilities

District	No. of Interviews (n)	< 15 min	15-60 min	>60 min
Makwanpur	80	16 (20%)	55 (69%)	9 (11%)
Jhapa	64	24 (38%)	38 (60%)	2 (3%)
Total	144	40 (28%)	93 (64%)	11 (8%)

The amount of time it takes for the patients to walk to the nearest HF may have an impact on the referral rate of the D/Js, or on the willingness and/or ability of the patients to go to the HF if advised to do so by the D/Js. It was assumed that the walking distances were similar for patients and the D/Js of their village. Eleven percent of D/Js in Makwanpur were living more than 60 minutes' walking distance from the nearest health facility, as compared to only 3% in Jhapa. In both districts, the majority of D/Js lived 15-60 minutes from the HF.

4.3. Perceived Quality and Effect of the ARI Orientation

The oriented D/Js were asked how they felt about the ARI orientation and how they felt it changed, if at all, their treatment pattern for cases of ARI and diarrhea. The findings are summarized below.

Table 9: Dhami/Jhankris' Evaluation of the Orientation by District

District	No. of Interviews (n)	Very good	Good	Poor
Makwanpur	45	40 (89%)	4 (9%)	1 (2%)
Jhapa	33	30 (91%)	3 (9%)	0 (0%)
Total	78	70 (90%)	7 (9%)	1 (1%)

Table 9 shows the D/Js' evaluation of the ARI orientation. Overall, the majority of the D/Js, (90%), felt that the orientation was very good. Only 1% felt that it was poor. Given the overwhelming positive response, it is likely that expansion of the D/J orientation program would be received well.

Table 10: Dhami/Jhankris' Perceived Difference in Treatment Pattern Post-Orientation by District

District	No. of Interviews (n)	Difference	No Difference
Makwanpur	45	40 (89%)	5 (11%)
Jhapa	33	31 (94%)	2 (6%)
Total	78	71 (91%)	7 (9%)

More D/J's in Jhapa, (94%), felt that there was a difference in their treatment pattern after the ARI orientation than in Makwanpur, (89%). Overall, a high percentage of the D/J's, (91%), reported that their treatment of ARI and diarrhea had changed. A small percentage, (9%), said that they perceived no difference. These results indicate that the orientation had an effect on the D/J's' treatment of ARI and diarrhea.

Table 11: Dhami/Jhankris' Perceived Difference in Treatment Pattern Post-Orientation by Literacy Status

Literacy Status	No. of Interviews (n)	Difference	No Difference
Literate	46	44 (96%)	2 (4%)
Illiterate	32	27 (84%)	5 (16%)

Literacy seemed to have played an important role in the D/J's' perceived effectiveness of the ARI orientation. Ninety-six percent of the literate D/J's perceived a difference in their treatment pattern after the ARI orientation, whereas 84% of the illiterate D/J's perceived a difference. These results suggest that the literate D/J's were better able to grasp the concepts of the orientation as they were presented, and therefore could more readily incorporate these concepts into their practice.

Table 12: Dhami/Jhankris' Perceived Difference in Treatment Pattern Post-Orientation by Age Group

Age Group	No. of Interviews (n)	Difference	No Difference
< 40 Years	5	4 (80%)	1 (20%)
40-60 Years	57	54 (95%)	3 (5%)
> 60 Years	16	13 (81%)	3 (19%)
Total	78	71 (91%)	7 (9%)

Table 12 compares different age groups of the D/J's with their perceived differences in their treatment patterns after the orientation. Although the majority of D/J's in all age groups perceived a difference, the largest effect was noted in the 40-60 year range, (95%).

4.4. Treatment Pattern of Dhami/Jhankris

When the D/J's were asked about their treatment methods, they said that they either chant mantras, do blowing (*phukphak*), throw coarse rice (*achheta phyakne*), give herbal medicines, refer to the health facilities, or a combination thereof. When the D/J's chant mantras, they are chanting traditional scripts that ask the evil spirits to leave the body. *Phukphak* includes blowing on the patient and chanting mantras. This practice is believed to remove the evil spirit from the body. *Achheta phyakne* refers to the practice in which the D/J takes uncooked rice in his hand, waves it around the body of the patient and then throws it away from the patient. This ritual is also performed to expel the evil spirit from the body. Herbal medicines are usually collected from a

wide variety of plants found in the forests near the D/Js' homes. Some D/Js willingly divulged the names of the herbs that they use, whereas most were hesitant to share this information. Because these practices take a certain amount of time (particularly administering herbal medicine because it involves gathering and preparing the herbs), they can lead to delays in referral of more serious cases of ARI or diarrhea.

Table 13: Dhami/Jhankris' Pre-Orientation Treatment Pattern by District

District	No. of Interviews (n)	<i>Phukphak/Achheta Phyakne</i>	Give Herbal Medicine	Worship The God	Refer to HF	Other
Makwanpur	45	41 (91%)	23 (51%)	6 (13%)	11 (24%)	2 (4%)
Jhapa	33	27 (82%)	12 (36%)	0 (0%)	16 (48%)	2 (6%)
Total	78	68 (87%)	35 (45%)	6 (8%)	27 (35%)	4 (5%)

Table 13 compares the treatment pattern of the D/Js in Makwanpur and Jhapa before they participated in the orientation. The D/Js often reported more than one treatment mode. In both Makwanpur and Jhapa, the majority of the D/Js, 91% and 82% respectively, treated by *phukphak/achheta phyakne*. A higher percentage of D/Js in Jhapa, 48%, referred their patients to a health facility as compared to 24% in Makwanpur. This could be explained by the fact that most health facilities in Jhapa were within 60 minutes walking distance from the D/Js' homes (refer to Table 8).



▲ Dhan Bahadur Bhujel, a D/J of Jhapa

Table 14: Dhami/Jhankris' Pre-Orientation Treatment Pattern by Distance (Time) to the Nearest Health Facility

Distance	No. of Interviews (n)	<i>Phukphak/Achheta Phyakne</i>	Give Herbal Medicine	Worship the God	Refer to HF	Other
< 5 Minutes	23	19 (83%)	10 (43%)	0 (0%)	10 (43%)	1 (4%)
15-60 Minutes	49	43 (88%)	20 (41%)	6 (12%)	17 (35%)	3 (6%)
> 60 Minutes	6	6 (100%)	5 (83%)	0 (0%)	0 (0%)	0 (0%)

The walking distance (time) to the nearest HF from the D/Js' homes and their treatment pattern is depicted in Table 14. The D/Js often gave more than one answer to this question. In instances

where the health facilities were farther than 60 minutes walking distance, 100% of the D/Js practiced *phukphak/achheta phyakne* and none referred their patients to the health facilities. Forty-three percent of the D/Js referred cases when the nearest health facility was less than five minutes away. Thirty-five percent of the D/Js referred cases when they lived within 15-60 minutes walking distance. These results indicate that proximity to the health facilities had an effect on the D/Js' referral rate. If referral linkages between the D/Js and the FCHVs had been stronger, then referrals could have been made to the FCHVs who are probably village neighbors.

Table 15: Dhami/Jhankris' Pre-Orientation Treatment Pattern by Literacy Status

Literacy Status	No. of Interviews (n)	<i>Phukphak/Achheta Phyakne</i>	Give Herbal Medicine	Worship the God	Refer to HF	Other
Literate	46	38 (83%)	20 (43%)	1 (2%)	19 (41%)	2 (4%)
Illiterate	32	30 (94%)	15 (47%)	5 (16%)	8 (25%)	2 (6%)

Table 15 compares the D/Js' literacy status with their treatment pattern prior to the orientation. The D/Js often gave more than one answer to this question. Forty-one percent of the literate D/Js and 25 % of illiterate D/Js reported that they made referrals to the health facilities.

Hulaki Thapa, a D/J of Jhapa, blowing the conch shell and sounding the bell in his worship place



Table 16: Dhami/Jhankris' Treatment Pattern by District

District	No. of Interviews (n)	<i>Phukphak/Achheta Phyakne</i>	Give Herbal Medicine	Worship the God	Refer to HF	Other
Makwanpur	80	53 (66%)	13 (16%)	9 (11%)	54 (68%)	16 (20%)
Jhapa	64	40 (63%)	11 (17%)	3 (5%)	50 (78%)	1 (2%)
Total	144	93 (65%)	24 (17%)	12 (8%)	104 (72%)	17 (12%)

A comparison of the two districts in terms of the D/J's' treatment pattern, irrespective of their orientation status, is shown in Table 16. A higher proportion of D/J's in Jhapa, 78%, reported that they referred their patients to the HF, as compared to Makwanpur where 68% reported referring their patients. The higher percentage in Jhapa could be attributed to the proximity of the health facilities from the D/J's' homes, as discussed earlier. Another factor could be a better chance of finding a health worker in the health facilities in Jhapa, which are far more accessible as compared to those in Makwanpur.

Table 17: Dhimi/Jhankris' Treatment Pattern by Literacy Status

Literacy Status	No. of Interviews (n)	Phukphak/Achheta Phyakne	Give Herbal Medicine	Worship the God	Refer to HF	Other
Literate	80	48 (60%)	16 (20%)	4 (5%)	63 (79%)	2 (3%)
Illiterate	64	45 (70%)	8 (13%)	8 (13%)	41 (64%)	15 (23%)

A comparison of the treatment pattern of literate and illiterate D/J's, irrespective of orientation status, is shown in Table 17. The D/J's often reported more than one answer. Seventy-nine percent of literate D/J's said they referred their patients to the HF, whereas 64% of the illiterate D/J's stated that they referred.

Table 18: Dhimi/Jhankris' Treatment Pattern by Orientation Status

Orientation Status	No. of Interviews (n)	Phukphak/Achheta Phyakne	Give Herbal Medicine	Worship the God	Refer to HF	Other
Oriented	78	47 (60%)	10 (13%)	2 (3%)	75 (96%)	13 (17%)
Non-oriented	66	46 (70%)	14 (21%)	10 (15%)	29 (44%)	4 (6%)

Table 18 compares the treatment pattern of oriented and non-oriented D/J's. The D/J's often reported more than one answer. Ninety-six percent of oriented D/J's reported referring their patients to health facilities as compared to 44% of the non-oriented D/J's. This indicates that the orientation may have had a positive impact on the D/J's' referral rate.

Table 19: Dhimi/Jhankris' Treatment Pattern Pre- and Post-Orientation

Orientation	No. of Interviews (n)	Phukphak/Achheta Phyakne	Give Herbal Medicine	Worship the God	Refer to HF	Other
Before	78	68 (87%)	35 (45%)	6 (8%)	27 (35%)	4 (5%)
After	78	47 (60%)	10 (13%)	2 (3%)	75 (96%)	13 (17%)

The D/J's' treatment pattern prior to and after the ARI orientation is presented in Table 19. Referrals to HFs increased from 35% to 96%. This result is indicative that the orientation was effective in meeting the primary objective of increasing the D/J's' referral rate and decreasing unnecessary delays. Performing *phukphak* decreased from 87% to 60%, and giving herbal medicine, (a practice that often leads to delay in referral), decreased from 45% to 13%.

A young D/J in Makwanpur performing the beating of drum



4.5. Knowledge about the Danger Signs of ARI

One of the main objectives of the ARI orientation was to enable the D/J's to recognize the danger signs of ARI and subsequently make timely referrals to the HFs. Although the D/J's were taught to look for all of the danger signs of ARI, the two primary danger signs, fast breathing and chest indrawing, were emphasized. The oriented D/J's were asked to recall the danger signs of ARI unprompted. If they could not remember any of the danger signs, they were prompted with the ARI classification card.

Table 20: Dhimi/Jhankris' Knowledge about the Danger Signs by District

District	No. of Interviews (n)	Fast Breathing	Chest Indrawing	Fever	Mal-nutrition	Unable to Eat/Drink	Difficult to Wake
Makwanpur	80	17 (21%)	15 (19%)	15 (19%)	17 (21%)	15 (19%)	11 (14%)
Jhapa	64	5 (8%)	4 (6%)	7 (11%)	0 (0%)	9 (14%)	1 (2%)
Total	144	22 (15%)	19 (13%)	22 (15%)	17 (12%)	24 (17%)	12 (8%)

A comparison of the D/J's' knowledge of the danger signs of ARI in the two districts, irrespective of their orientation status, is presented in Table 20. In Makwanpur, 21% of the D/J's recognized fast breathing and 19% recognized chest indrawing, whereas in Jhapa, only 8% recognized fast breathing and 6% recognized chest indrawing. Overall, the D/J's in Makwanpur had better knowledge of the danger signs. This can partly be explained by the fact that the ARI Strengthening Program has existed longer in Makwanpur than in Jhapa. However, overall, the of D/J's' knowledge of danger signs was low in both districts.

Table 21: Dhimi/Jhankris' Knowledge about the Danger Signs by Orientation Status

Orientation Status	No. of Interviews (n)	Fast Breathing	Chest Indrawing	Fever	Mal-nutrition	Unable to Eat/Drink	Difficult to Wake
Oriented	78	16 (21%)	14 (18%)	18 (23%)	13 (17%)	21 (27%)	8 (10%)
Non-Oriented	66	6 (9%)	5 (8%)	4 (6%)	4 (6%)	3 (5%)	4 (6%)

Table 21 compares oriented and non-oriented D/Js' knowledge about the danger signs of ARI. The oriented D/Js had an overall better knowledge about all six of the danger signs. This finding indicates that the orientation was effective to some extent in increasing the D/Js' knowledge about ARI. However, the performance of the oriented D/Js was not as good as desired, possibly because of the short duration of the orientation program and lack of follow up.

When the D/Js' knowledge about the danger signs of ARI, irrespective of orientation status, was compared against their literacy status, it was found that a slightly higher percentage of the literate D/Js were able to recognize the danger signs. Illiterate D/Js performed slightly better in the recognition of malnutrition as one of the danger signs.

No substantial difference was found between the D/Js of different age groups in terms of their ability to recognize the danger signs of ARI.

4.6. Knowledge about Home Therapy for ARI

The D/Js were also taught about home therapies (HT) to be used for cases of ARI. They were taught how to advise the caretakers of the children about proper home therapy for cough and cold (no pneumonia). These home therapies include clean the child's nose, look for chest indrawing (CI) and fast breathing (FB), increase fluids including breast feeding (BF), continue giving foods, and keep the child warm.

Table 22: Dhimi/Jhankris' Knowledge about Home Therapy by District

District	No. of Interviews (n)	Knows at Least One HT	Clean Nose	Look for CI/FB	Increase Fluid/BF	Continue Feeding	Keep Baby Warm
Makwanpur	80	43 (54%)	17 (21%)	4 (5%)	29 (36%)	12 (15%)	21 (26%)
Jhapa	64	24 (38%)	5 (8%)	6 (9%)	15 (23%)	3 (5%)	12 (19%)
Total	144	67 (47%)	22 (15%)	10 (7%)	44 (31%)	15 (10%)	33 (23%)

Table 22 shows that the D/Js in Makwanpur had better knowledge about 4 out of the 5 home therapies: clean the nose, increase fluid/BF, continue feeding, and keep baby warm. In addition, a higher percentage of D/Js in Makwanpur knew at least one home therapy. Again, these results may be due to the fact that the ARI Strengthening Program has been present in Makwanpur longer than in Jhapa. However, in Jhapa, a higher percentage knew about looking for chest indrawing and fast breathing which are the critical danger signs for ARI.

Table 23: Dhimi/Jhankris' Knowledge about Home Therapy by Orientation Status

Orientation	No. of Interviews (n)	Knows at Least One HT	Clean Nose	Look for CI/FB	Increase Fluid/BF	Continue Feeding	Keep Baby Warm
Oriented	78	52 (67%)	18 (23%)	8 (10%)	31 (40%)	13 (17%)	26 (33%)
Non-Oriented	66	15 (23%)	4 (6%)	2 (3%)	13 (20%)	2 (3%)	7 (11%)

Table 23 compares the oriented and non-oriented D/Js with respect to their knowledge of home therapies. Overall, the oriented D/Js performed better. However, the results for the oriented D/Js were not as good as desired, particularly in the therapies “clean the nose”, “look for CI/FB” and “continue feeding”. These results indicate that, although the orientation was probably effective in educating the D/Js about home therapies for ARI, it may not have been long enough or used effective methods to emphasize this point.

Table 24: Dhami/Jhankris' Knowledge about Home Therapy by Literacy Status

Literacy Status	No. of Interviews (n)	Knows at Least One HT	Clean Nose	Look for CI/FB	Increase Fluid/BF	Continue Feeding	Keep Baby Warm
Literate	80	41 (51%)	13 (16%)	9 (11%)	29 (36%)	10 (13%)	20 (25%)
Illiterate	64	26 (41%)	9 (14%)	1 (2%)	15 (23%)	5 (8%)	13 (20%)

The D/Js' knowledge about home therapy was also compared with respect to their literacy status. The literate D/Js performed better for all therapies, however the percentages were close in clean the nose and keep baby warm. These findings emphasize the need to develop appropriate teaching tools and methods to educate the illiterate D/Js.

4.7. Treatment of Patients with Cough and Cold (No Pneumonia)

The D/Js were asked how they treated children who had a simple cough and cold (no pneumonia). When the D/Js receive cough and cold patients they should advise home therapy to the caretakers as per the WHO guidelines. This point was emphasized during the orientation.

Table 25: Dhami/Jhankris' Treatment of Cough and Cold (No Pneumonia) Patients by District

District	No. of Interviews (n)	Advise HT	Phukphak/ Achheta Phyakne	Give Herbal Medicine	Other
Makwanpur	80	22 (28%)	37 (46%)	30 (38%)	24 (30%)
Jhapa	64	17 (27%)	20 (31%)	20 (31%)	19 (30%)
Total	144	39 (27%)	57 (40%)	50 (35%)	43 (30%)



▲ A caretaker in Jhapa who had visited a D/J

Table 25 compares the D/Js of the two districts in terms of their treatment of cough and cold patients. No majority or clear trend was revealed in this comparison. Percentages in “other” treatments, which mostly included referral to the HF, were slightly higher than in “advise HT”. In future orientations, emphasis should be placed on discriminating between those cases which need to be referred and those which can be treated at home.

Table 26: Dhami/Jhankris' Treatment of Cough and Cold (No Pneumonia) Patients by Orientation Status

Orientation	No. of Interviews (n)	Advise HT	<i>Phukphak/Achheta Phyakne</i>	Give Herbal Medicine	Other
Oriented	78	26 (33%)	34 (44%)	21 (27%)	32 (41%)
Non-Oriented	66	13 (20%)	23 (35%)	29 (44%)	11 (17%)

Table 26 compares the D/Js' pattern of treatment of cough and cold patients between the oriented and non-oriented D/Js. Thirty-three percent of the oriented D/Js advised HT, whereas only 20% of the non-oriented advised HT. The proportion of oriented D/Js advising "other" treatment, (which mostly included referral to HF), was considerably higher than for the non-oriented D/Js. These results indicate that the oriented D/Js had better knowledge about home therapy and when it should be used, which can possibly be attributed to their orientation on ARI. However, as indicated by the 41% referral rate, unnecessary referrals may have been made by the oriented D/Js. Again, future orientations will need to stress differentiation between cases that require referral and those that can be treated at home.

When literacy status was taken into account, 31% of the literate D/Js advised HT for cough and cold patients as compared to 22% of the illiterate D/Js.

4.8. Dhami/Jhankris' Awareness of the FCHVs and Their Treatment of Pneumonia

The D/Js were asked if they knew the FCHV of their ward and whether they knew about her treatment of pneumonia in children under five years of age. According to the national ARI program requirements, the role of the FCHV is to treat simple pneumonia with cotrimoxazole tablets, and to refer more severe cases to the health facilities.

Table 27: Dhami/Jhankris' Awareness of the FCHVs and Their Treatment of Pneumonia by District

District	No. of Interviews (n)	Knows FCHV (a) a/n	Knows FCHV in Ward Treats Pneumonia (b) b/a	Knows about FCHV Treatment of Pneumonia b/n
Makwanpur	80	62 (78%)	42 (68%)	42 (53%)
Jhapa	64	39 (61%)	20 (51%)	20 (31%)
Total	144	101 (70%)	62 (61%)	62 (43%)

In Makwanpur, 78% of the D/Js knew the FCHV of their ward. Of those who knew the FCHV, 68% knew she treated pneumonia. Similarly, in Jhapa, 61% knew the FCHV of their ward and

51% knew she treated pneumonia. Overall, 53 % of the D/Js in Makwanpur and 31% in Jhapa were aware that FCHVs treat cases of pneumonia. Better knowledge among D/Js in Makwanpur about the FCHVs' treatment of pneumonia may be due to the ARI Strengthening Program being in existence longer in this district than in Jhapa.

Table 28: Dhimi/Jhankris' Awareness of FCHVs and Their Treatment of Pneumonia by Orientation Status

Orientation Status	No. of Interviews (n)	Knows FCHV(a) a/n	Knows FCHV in Ward Treats Pneumonia(b) b/a	Knows about FCHV Treatment of Pneumonia B/n
Oriented	78	63 (81%)	40 (63%)	40 (51%)
Non-Oriented	66	38 (58%)	22 (58%)	22 (34%)

Eighty-one percent of the oriented D/Js knew the FCHVs of their ward, and of those who knew the FCHV, 63% knew that she treated pneumonia. Among the non-oriented D/Js, 58% knew the FCHV of their ward and 58% knew she treated pneumonia. Overall, 51 % of the oriented D/Js and 34 % of the non-oriented D/Js knew that FCHVs treat cases of pneumonia. Establishing stronger links between the D/Js and FCHVs will facilitate better referral practices at the ward level.

4.9. Knowledge, Skill and Practice in Control of Diarrheal Diseases

Diarrheal dehydration is the second leading cause of death in children under five in Nepal. During the orientation, the D/Js were briefly taught about the danger signs of diarrheal dehydration, ("general condition", "tears", "thirst", "skin elasticity", "sunken eyes", "dry mouth"), and about home therapy. Because the D/Js frequently see cases of diarrhea, they were oriented on how to manage cases of diarrhea at home and when to refer to the FCHV or HF. During the course of the interview, the D/Js were asked if they knew about the signs of dehydration. They were also shown a packet of ORS (*Jeevan Jal*) and asked to identify it. If they claimed to know how to prepare ORS, they were asked to demonstrate the preparation.

Table 29: Dhimi/Jhankris' Knowledge about Signs of Dehydration by District

Signs of Dehydration	Makwanpur (n=80)	Jhapa (n=64)	Total (N=144)
General Condition	51 (64%)	36 (56%)	87 (60%)
Tears	0 (0%)	8 (13%)	8 (6%)
Thirst	29 (36%)	5 (8%)	34 (24%)
Skin Elasticity	1 (1%)	4 (6%)	5 (3%)
Sunken Eyes	38 (48%)	12 (19%)	50 (35%)
Dry Mouth	29 (36%)	11 (17%)	40 (28%)

Table 29 shows a comparison between the two districts with regard to the D/Js' knowledge of the danger signs of dehydration. The D/Js of Makwanpur had a higher percentage of recognition for four of the six danger signs: "general condition", "thirst", "sunken eyes", and "dry mouth".

Table 30: Dhimi/Jhankris' Knowledge about Signs of Dehydration by Orientation Status

Signs of Dehydration	Oriented (n=78)	Non-Oriented (n=66)
General Condition	49 (63%)	33 (50%)
Tears	5 (6%)	3 (5%)
Thirst	22 (28%)	12 (18%)
Skin Elasticity	4 (5%)	1 (2%)
Sunken Eyes	32 (41%)	18 (27%)
Dry Mouth	21 (27%)	19 (29%)

The difference in knowledge about the signs of dehydration between the oriented and non-oriented D/Js is shown in Table 30. The oriented D/Js had considerably better knowledge about three out of the six danger signs, general condition, thirst and sunken eyes. This suggests that the orientation may have had a positive effect, although the overall low percentages indicate that more emphasis needs to be placed on this aspect during future orientations.

When the D/Js' knowledge about signs of dehydration was compared against their literacy status, it was found that a higher percentage of literates knew all six danger signs of dehydration.

4.10. Knowledge about Referral Signs of Diarrhea

The D/Js were asked about their knowledge concerning the referral signs for children with diarrhea. According to WHO guidelines, the referral signs for diarrhea include "frequent watery stools", "repeated vomiting", "marked thirst", the "child being unable to eat or drink", "fever", "blood in the stool" and the "child not getting better". In order for the D/Js to make timely referrals of severe cases of diarrhea, they need to have an awareness of these seven signs.

Table 31: Dhimi/Jhankris' Knowledge of Referral Signs by District

Referral Signs	Makwanpur (n=80)	Jhapa (n=64)	Total (N=144)
Frequent Watery Stools	39 (49%)	19 (30%)	58 (40%)
Repeated Vomiting	15 (19%)	12 (19%)	27 (19%)
Marked Thirst	10 (13%)	5 (8%)	15 (10%)
Unable to Eat/Drink	3 (4%)	5 (8%)	8 (6%)
Fever	5 (6%)	3 (5%)	8 (6%)
Blood in Stool	7 (9%)	4 (6%)	11 (8%)
Not Getting Better	37 (46%)	7 (11%)	44 (31%)

Table 31 compares the D/Js of Makwanpur and Jhapa in terms of their knowledge about the referral signs of diarrhea. The D/Js in Makwanpur had considerably better recall than those in Jhapa for three of the seven signs: “frequent watery stools”, “marked thirst”, and “not getting better”. Overall, the D/Js’ knowledge of these referral signs showed need for much improvement.

Table 32: Dhami/Jhankris’ Knowledge of Referral Signs by Orientation Status

Referral Signs	Oriented (n=78)	Non-Oriented (n=66)
Frequent Watery Stools	38 (49%)	20 (30%)
Repeated Vomiting	16 (21%)	11 (17%)
Marked Thirst	11 (14%)	4 (6%)
Unable to Eat/Drink	5 (6%)	3 (5%)
Fever	5 (6%)	3 (5%)
Blood in Stool	8 (10%)	3 (5%)
Not Getting Better	29 (37%)	15 (23%)

Table 32 compares the knowledge about referral signs of diarrhea between the oriented and non-oriented D/Js. The oriented D/Js had better knowledge for all seven signs of dehydration. However, there was little difference between the two groups for the signs “unable to eat/drink” and “fever”. Again, the overall percentages were quite low for each sign and indicate the need to emphasize this topic in future orientations.

When comparing the knowledge of referral signs by literacy status, it was found that the literate D/Js performed slightly better.

4.11. Knowledge about the Three Home Rules

According to standard case management guidelines of WHO, the three rules for treating diarrhea at home are: 1) increase fluids, 2) continue feeding and 3) refer to a health facility if the child does not get better in 3 days or develops any of the danger signs. In Nepal, some villagers still believe in withholding food and fluid during a diarrheal episode. Children suffering from diarrhea can die from dehydration or suffer from subsequent malnutrition. The questionnaire addressed the D/Js’ knowledge about these three home rules.

Table 33: Dhami/Jhankris’ Knowledge about the Three Home Rules by District

District	No. of Interviews (n)	Increase Fluid	Continue Feeding	Knows At Least One Reason for Referral
Makwanpur	80	40 (50%)	5 (6%)	67 (84%)
Jhapa	64	21 (33%)	1 (2%)	34 (53%)
Total	144	61 (42%)	6 (4%)	101 (70%)

A comparison of the two districts with regard to the D/Js' knowledge about the three home rules is shown in Table 33. Overall, the D/Js in Makwanpur had better knowledge about the three home rules as compared to those in Jhapa. However, knowledge about continued feeding was alarmingly low in both districts.

Table 34: Dhamis/Jhankris' Knowledge about the Three Home Rules by Orientation Status

Orientation Status	No. of Interviews (n)	Increase Fluid	Continue Feeding	Knows At Least One Reason for Referral
Oriented	78	41 (53%)	4 (5%)	64 (82%)
Non-Oriented	66	20 (30%)	2 (3%)	37 (56%)



▲ Mel Bahadur Thing prepares ORS as the interviewers look on

Table 34 compares the knowledge about the three home rules of diarrhea between the oriented and non-oriented D/Js. A considerably higher percentage of oriented D/Js knew about increasing fluids. The knowledge about continuing feeding was very low in both groups. A higher percentage of the oriented D/Js, (82%), knew at least 1 indication for referral to the HF as compared to the non-oriented D/Js, (56%).

Table 35: Dhami/Jhankris' Knowledge and Skill in ORS Preparation by District

District	No. of Interviews (n)	Recognize ORS Packets	Know How to Prepare ORS	Measure Correct Volume of Water
Makwanpur	80	64 (80%)	48 (75%)	22 (46%)
Jhapa	64	54 (84%)	36 (67%)	10 (28%)
Total	144	118 (82%)	84 (71%)	32 (38%)

Table 35 shows a comparison of the districts with regard to the D/Js' knowledge about ORS (*Jeevan Jal*) packets, ORS preparation, and measurement of the correct volume of water. A slightly higher percentage of the D/Js in Jhapa could recognize the ORS packet. However, a higher percentage of D/Js in Makwanpur claimed that they knew how to prepare ORS correctly. Although many D/Js claimed to know how to prepare ORS correctly, they could not do so upon request. It was interesting to find that the majority of D/Js stated that preparing ORS was a woman's job and that they did not need to know about its preparation.

Table 36: Dhami/Jhankris' Knowledge and Skill in ORS Preparation by Orientation Status

Literacy Status	No. of Interviews (n)	Recognize ORS Packets	Know How to Prepare ORS	Measure Correct Volume of Water
Oriented	78	67 (86%)	52 (78%)	22 (42%)
Non-oriented	66	51 (77%)	32 (63%)	10 (31%)

Table 36 depicts the D/Js' knowledge about ORS and skill in ORS preparation with respect to their orientation status. A higher percentage of oriented D/Js recognized ORS and were able to demonstrate its correct preparation.

Forty-four percent of the literate D/Js who stated they knew how to prepare ORS could demonstrate its preparation correctly as compared to 28% of the illiterate D/Js.

4.12. Results of Health Facility In-Charge Interviews

Health facility in-charges were interviewed in order to help estimate the referral rate of the D/Js in their district and to get a sense of the in-charges' impression of the D/J orientation.

Table 37: Health Facility In-Charges' Estimation of the Dhami/Jhankri Referral Rate

District	No. of Interviews (n)	In-charges Aware of D/J Orientation	In-charges Ever Meeting an Oriented D/J	No. of HFs Receiving Referred Patients	Patients* Referred by D/Js Seen by HF/Month
Jhapa	4	4 (100%)	3 (75%)	4 (100%)	6
Makwanpur	12	11 (92%)	10 (83%)	9 (75%)	5
Total	16	15 (94%)	13 (81%)	13 (81%)	5

* Estimates given by HF in-charges.

Table 37 shows that 100% of the in-charges at health facilities in Makwanpur and 92% in Jhapa were aware of the ARI orientation for D/Js. When the in-charges were asked if they had ever met an oriented D/J, 75% in Jhapa and 83% in Makwanpur answered positively. One hundred percent of the in-charges in Jhapa and 75% in Makwanpur claimed to have received referral patients referred from the D/Js. However, it was not possible to verify the orientation status of D/Js who made these referrals. There was not much difference between the estimated number of D/J referral patients received by the HFs in Makwanpur and Jhapa.



▲ VHW and MCHW at Sisneri HP, Mawaknpur

In Makwanpur, many health facilities are far from the villages and inaccessible. Furthermore, at some of these remote health facilities, availability of staff is lower than in the health facilities of Jhapa. For these reasons, patients in Makwanpur may choose not to visit the health facilities even after they are advised to do so by the D/J's. In Jhapa, the majority of the health facilities are within sixty minutes walking distance from the villages and therefore, are more accessible than those in Makwanpur, (ref. table 8).

Overall, the HF in-charges felt that the D/J ARI orientation program was worthwhile.

4.13. Results from interviews with caretakers of children under the age of five suffering from ARI or diarrhea

One objective of this study was to interview caretakers who had taken their children suffering from ARI and/or diarrhea to oriented D/J's within the two weeks prior to the study. The purpose of these interviews was to document how oriented D/J's managed cases of ARI and/or diarrhea as per the caretakers, and to get the caretakers' impressions of the D/J's' management. Three caretakers were interviewed in Makwanpur and one was interviewed in Jhapa.

Of the three caretakers interviewed in Makwanpur, one took her child to the D/J for *rugaa/khoki* (cough/cold) and fever, and two took their children for diarrhea. In Jhapa, the caretaker took the child to the D/J for treatment of both *rugaa/khoki* and diarrhea. The caretakers of both districts stated that the D/J's treated their children by *phukphak*. In Makwanpur, the caretakers said that the D/J would "blow" on the baby or on oil, or splash blown water onto the child. In Jhapa, the caretaker reported that the blowing was done on water and her child was also given an amulet to wear.

In Makwanpur, one D/J advised the mother to continue breast-feeding for *rugaa/khoki*. Another D/J advised the caretaker not to give spicy or sour food, or cold water to the child suffering from ARI. In this instance, the caretaker was also advised to come back the next day for follow up.

When asked if the D/J's referred them to either a HF, FCHV, or drug store, two caretakers in Makwanpur said they were advised to go to a HF/FCHV. The other caretaker in Makwanpur was advised to go to a drug store. Of these three, only two complied with the referral recommendations. The caretaker in Jhapa stated her child was not referred. However, she had already visited a HF before visiting the D/J. Among the four caretakers interviewed, two said their children were cured, while two stated their children were still sick.

Only two of the four caretakers recognized the FCHVs of their ward and of them, only one was aware that the FCHV provided treatment for pneumonia. This caretaker thought treating pneumonia by an FCHV was a good idea.

When the caretakers of Makwanpur were asked where they would take their children the next time they suffered from *rugaa/khoki* or diarrhea, one stated that she would take her child to the health facility, one said she would visit the D/J, and the other stated she would take her child to both the HF/FCHV and the D/J. It was not clear which provider this caretaker would visit first. In Jhapa, the caretaker stated she would take her child to the D/J first and then to the HF because she believed the D/J had been more effective in treating her child.

5. Conclusions

The D/J's' overall knowledge about the danger signs and home therapies for childhood ARI and diarrhea improved after the orientation. The orientation was not intended to discourage D/J's from performing their traditional practices, but rather to teach them to recognize when a child needed referral to an FCHV or health facility. Ultimately, this would help in minimizing delays in appropriate treatment. Many of the oriented D/J's reported that they learned the danger signs of childhood ARI and diarrhea and were better able to distinguish those cases which required referral.

With regard to management of ARI, 35% of the D/J's stated that they referred ARI cases prior to receiving orientation compared to 96% after orientation. When oriented and non-oriented D/J's were compared, ninety-six percent of the oriented D/J's stated they currently referred ARI patients to the health facilities whereas only 44% of the non-oriented D/J's stated they referred such patients. A higher percentage of oriented D/J's recognized the two important danger signs of ARI, "fast breathing" and "chest indrawing". However, the oriented D/J's' overall ability to recognize the danger signs of ARI was relatively low. This could be an indication that the duration of the ARI orientation may have been too short and was without any follow-up in the intervening 14 months.

Favorable results were also seen in the oriented D/J's' knowledge of home therapy for ARI. A higher percentage of oriented D/J's advised home therapy for their cough and cold patients. In addition, 67% of the oriented D/J's knew at least one home therapy for ARI, as compared to 23% of the non-oriented D/J's.

Similar results were also observed in regard to the D/J's' knowledge about diarrhea. Overall, the oriented D/J's had better recall of the signs of dehydration than the non-oriented ones. They knew that they should look for a change in "general condition", "thirst", and "sunken eyes". However, knowledge about "dry mouth", "decreased skin elasticity" and "absence of tears" was poor in both groups. The oriented D/J's also had a much better knowledge of the referral signs for diarrhea as compared to the non-oriented D/J's. A higher percentage of oriented D/J's were able to recognize two of the three rules of home therapy, "increase fluids" and "knows at least one reason for referral". However, knowledge about "continued feeding" was poor in both groups.

Several differences were found between the performances of the D/J's in Makwanpur and Jhapa. These disparities could be due to the different topographical conditions, proximity and accessibility of the health facilities (HF), length of time the community level pneumonia program had been present, and approach and timing of the CDD reactivation program in the two districts. In Makwanpur, the CDD Reactivation Program was implemented in 1996/97 at both the HF and community levels whereas, in Jhapa, it was implemented only at the HF level in 1993. The ARI Strengthening Program started in Makwanpur in 1995, and in Jhapa in 1998. With regard to ARI, 21% of the D/J's in Makwanpur recognized fast breathing and 19 % recognized chest indrawing which are the two critical danger signs of ARI. In Jhapa, only 8% of the D/J's recognized fast breathing and 6% recognized chest indrawing. These findings could possibly be attributed to the fact that the ARI Strengthening Program started in Makwanpur three years before it reached Jhapa. The HF staff in Makwanpur, therefore, may have been better able to educate the D/J's

about ARI. However, these percentages are overall unsatisfactory and more emphasis needs to be placed on this aspect of the orientation in the future. A higher percentage of D/Js in Jhapa referred ARI patients to the HF, which could be due to overall better accessibility of the health posts in this district. The D/Js in Makwanpur had better knowledge about four of the five home therapies (clean the nose, increase fluid/breast feeding, continue feeding and keep baby warm). The D/Js' in both districts had poor knowledge about looking for chest indrawing and fast breathing, which are the two critical danger signs of ARI.

The study also revealed differences between the two districts in terms of the D/Js knowledge about diarrheal dehydration, referral signs of diarrhea, the three home rules for treating diarrhea at home, and ORS preparation. The D/Js of Makwanpur had overall better recall of the danger signs of dehydration, referral signs of diarrhea, and the three home rules. They also were better able to demonstrate the correct preparation of ORS. These findings could be explained by the fact that the CDD Reactivation Program was implemented at both the health facility and community levels in Makwanpur, whereas in Jhapa it was implemented only at the health facility level.

Literacy status of the D/Js seems to have played an important role in the effectiveness of orientation. Most notably, a higher percentage of literate D/Js referred their patients to the health facilities as compared to the illiterate D/Js. The literate D/Js were also better able to remember the two critical danger signs of ARI (fast breathing and chest indrawing). Regarding knowledge about ARI home therapy, again the literate D/Js had better knowledge about what advice to give the caretakers, such as cleaning the nose and looking for chest indrawing/fast breathing. The literate D/Js also had better recall of the referral signs of diarrhea. In addition, more of the literate D/Js were able to correctly prepare ORS. These results are important because they indicate that the literate D/Js may have been better able to retain the information they were given during the orientation as it was presented. In light of these results, innovative techniques should be developed for the orientation of illiterate D/Js.

Interviews with health facility staff in the two districts were helpful in making a preliminary assessment of the D/Js' referral rates. However, the number of interviews was small and there was no way to confirm the accuracy of the reports or the orientation status of the D/Js who reportedly made the referrals. Because there were only four interviews with caretakers who visited D/Js within the two weeks prior to the study, no definitive conclusions could be drawn.

In order to refer cases to the FCHVs, it is necessary that the D/Js know the FCHV of their ward and of her treatment of pneumonia. Eighty-one percent of the oriented D/Js and 58% of the non-oriented D/Js knew the FCHVs of their ward. Among the oriented D/Js who knew the FCHV, 63 % knew about her treatment of pneumonia. Among the non-oriented D/Js, 58% knew about the FCHVs' treatment of pneumonia. Regardless of whether they knew the FCHVs of their ward, 51% of the oriented D/Js and 34 % of the non-oriented D/Js knew about FCHVs' treatment of pneumonia. It will be important in future orientations to strengthen the link between the D/Js and the FCHVs in order to facilitate the referral mechanism.

The results of this study suggest that the ARI orientation given to the D/Js was, to some extent, effective and worthwhile. It is also evident that the D/Js are willing and able to learn more about western modalities to assess and treat ARI and diarrheal disease. More specifically, the orientation seemed to be effective in teaching the D/Js how to recognize the danger signs of

childhood ARI and diarrhea and when to make referrals to FCHVs and/or the health posts, with the ultimate goal of minimizing delays in appropriate treatment. In addition, this study revealed aspects of the D/J orientation which could be improved upon when the program is implemented and/or expanded in the future. These aspects are included in the following recommendations.

6. Recommendations

The present study has shown that the ARI orientation has brought about some positive changes in the knowledge, skill and reported practices of the D/Js in Makwanpur and Jhapa. It also demonstrated that this type of orientation should be continued in program activities in the future. However, some aspects need improvement and strengthening, and the following recommendations are made based on the findings of the present study.

6.1. Target and reinforce specific messages in future orientations

This study revealed several areas which should be stressed in future orientations. These include: danger signs requiring immediate referral for pneumonia and diarrhea; correct home therapy/home care messages with particular emphasis on continued feeding during diarrheal episodes and correct preparation of ORS. It was interesting to find that the majority of the D/Js interviewed stated that preparing ORS was a woman's job and they did not need to know about its preparation. They, therefore, could not correctly prepare it. This should be stressed as *everyone's* responsibility in future orientations.

6.2. Improve the linkage between the *dhami/jhankris* and the FCHVs

As two important members of the community level health worker cadre, the link between the D/Js and the FCHVs should be strengthened. If the D/Js know their FCHV, and are aware that she can diagnose and treat pneumonia and provide ORS for dehydrated children, then they can confidently refer sick children for immediate treatment, regardless of the time of the day. In order to strengthen their mutual understanding of the other's role, it is recommended to include the FCHV living in the same ward in future D/J trainings.

6.3. Develop new ways to orient illiterate *dhami/jhankris*

Many illiterate D/Js could not remember the danger or referral signs of ARI. One possible reason could be the D/Js inability to read the mother's booklet they were given and understand the meaning of the pictures accompanying the text. Therefore, new ways to orient the illiterate D/Js in ARI should be developed. Refresher trainings will help them retain the information taught during the orientation. More appropriate training materials (e.g. audio-visual materials and pictorials) should be used.

6.4. Utilize experienced trainers

Experienced trainers enhance the quality of any training. In order for health facility staff to conduct this type of orientation, they also require more training and education in ARI and diarrhea. Experienced and qualified trainers from other districts should also be used for orientations in the future and the possibility of utilizing trainers from other organizations such as I/NGOs should also be explored.

6.5. Increase the duration and frequency of subsequent orientations for *dhami/jhankris*

Many of the oriented D/Js interviewed stated that three hour long orientation was not long enough and they could not retain much of the knowledge from the orientation. Future orientations should be conducted for one full day. The D/Js felt that additional training given periodically would be the best way to increase their knowledge and memory, this would also be desirable.

7. References

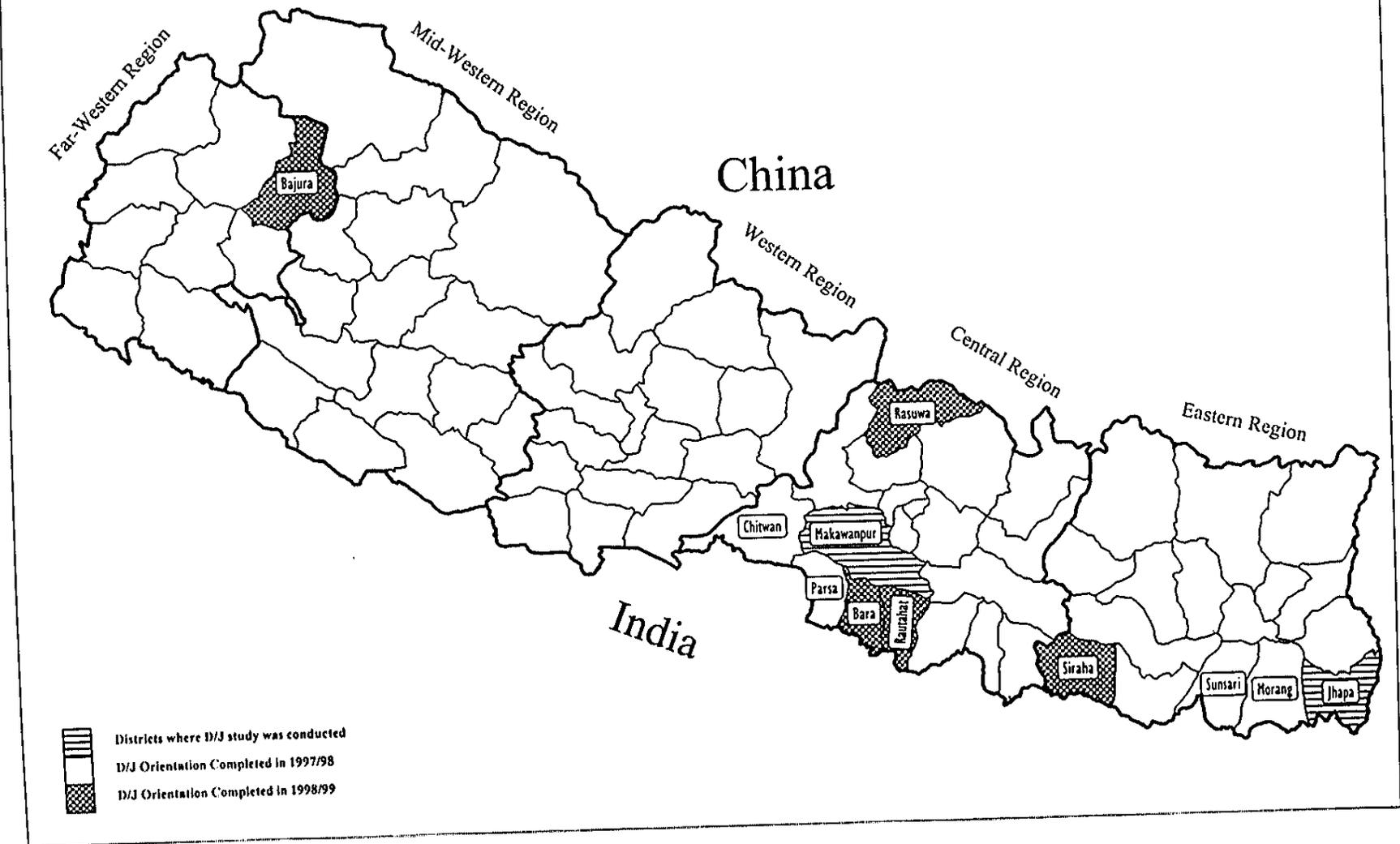
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Annexes

- Annex - 1 Map of Nepal – Orientation and Assessment Districts
- Annex - 2 Course Content of the *Dhami/Jhankri* Orientation
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MAP OF NEPAL - ORIENTATION AND ASSESSMENT DISTRICTS

Annex - 1



Course Content of the *Dhami/Jhankri* Orientation

Objectives of the Orientation:

At the end of the orientation the participants will be able to:

- identify the problems of cough/cold/pneumonia, and diarrhea
- define cough/cold/pneumonia and diarrhea
- identify the danger signs of cough/cold/pneumonia and dehydration in children under five
- identify children who should be referred
- advise home therapies for cough/cold/pneumonia and diarrhea

Content	Duration	Activity
Registration	15 minutes	Registration of the participants
Introductions	30 minutes	Introductions between the D/Js and facilitators
Significance of Pneumonia in Nepal	30 minutes	Forty to forty-five thousand children die each year in Nepal due to pneumonia. Need for timely treatment/referral.
Define cough/cold/pneumonia?	60 minutes	Present questions regarding causes of cough/cold/pneumonia and initiate discussion. Facilitator gives his opinion about what causes cough/cold/pneumonia. Initiate discussion about the current community practices in the treatment of fast breathing and chest indrawing. Emphasize the importance of timely referral.
Identify danger signs of ARI and diarrhea	30 minutes	Use ARI classification card and diarrhea poster to initiate discussion about danger signs and when to refer. Clarification by the facilitator.
Home Therapy for diarrhea, cough/cold/pneumonia	30 minutes	Discussion about the home therapy for diarrhea and cough/cold. Use home therapy card and posters.
Referral procedure to FCHV/HF	15 minutes	To avert death, stress the importance of recognizing danger signs and making timely referrals.

ख) कार्यक्रम सम्बन्धी जानकारी :

*८) तपाईंले २०५४ सालमा श्वास प्रश्वास (रुघाखोकी/निमोनिया) रोगसम्बन्धी तालीम लिनु भएको रहेछ । सो तालीम तपाईंलाई कस्तो लाग्यो ? (तालीम नलिएकोलाई नसोध्ने) ।

- धेरै राम्रो किन
- ठीकै छ किन
- ठीक लागेन किन
- अन्य

*९) तालीम लिनुभन्दा पहिले र तालीम लिएपछि तपाईंले गर्ने कार्यमा केही फरक भएको महसुस गर्नुभएको छ ? (तालीम नलिएकोलाई नसोध्ने)

- छ छैन

*१०) श्वास प्रश्वासको तालीम लिनुभन्दा पहिला श्वास प्रश्वासको रोगका ५ वर्ष मुनिका बच्चाहरु तपाईंकोमा आउँदा के गर्नुहुन्थ्यो ? (तालीम नलिएकोलाई नसोध्ने) ।

- फुकफाक गर्थे
- जडीबुटीहरु दिन्थे (के के हो उल्लेख गर्नुहोस्)
- स्वास्थ्य संस्थामा पठाउँथे
- देउताको पूजा गर्न भन्थे (देउताको नाम उल्लेख गर्नुहोस्)
- देउताको पूजा गर्न गरिदिन्थे
- अन्य (खुलाउने)

११) अहिले कसरी उपचार गर्नुहुन्छ ?

- जाँचेर स्वास्थ्य संस्थामा/म.स्वा.स्व.से कहाँ पठाउनु पर्ने र नपर्ने विरामी छुट्याउँछु ।
- फुकफाक गर्छु देवी देवताको पूजा गरिदिन्छु/गराउन लाउँछु
- जडीबुटीहरु दिन्छु (नाम उल्लेख गर्नुहोस्)
- उपचारको लागि म.स्वा.से. कहाँ पठाउँछु ।
- स्वास्थ्य संस्थामा पठाउँछु ।
- अन्य (धामी भाँक्रीले भनेका कुराहरु टिप्पै जाने)

१२) श्वास प्रश्वासको विरामीमा के के लक्षण/चिन्हहरु भएमा न्यूमोनिया भएको मान्नुहुन्छ ?

नकोट्याई सोधेको

- छिटो छिटो सास फेरेमा
- कोखा हानेमा
- ज्वरो आएमा/सितांग भएमा
- कुपोषण भएमा
- खान पिउन नसकेमा
- उठाउन गाह्रो भएमा
- अन्य (खुलाउने)

कोट्याएर सोधेको (क्लासिफिकेसन कार्ड देखाउने)

- छिटो छिटो सास फेरेमा
- कोखा हानेमा
- ज्वरो आएमा/सितांग भएमा
- कुपोषण भएमा
- खान पिउन नसकेमा
- उठाउन गाह्रो भएमा
- अन्य (खुलाउने)

नोट : तालीम नपाएको धामी भाँक्रीबाट माथिको उत्तर आएमा कसरी थाहा पाउनु भयो भनेर सोध्ने र भनेका कुराहरु उल्लेख गर्ने

१३) खतरा लक्षणहरू देखिएमा के गर्नुहुन्छ ?

स्वास्थ्य संस्थामा पठाउँछु

महिला स्वयं सेविकामा पठाउँछु

फारफुक गर्छु/दयांग्रो बजाएर उपचार गर्छु ।#

जडीबुटी दिन्छु (नाम उल्लेख गर्नुहोस्)#

माथिका २ अनुसार आफैले उपचार गरेमा- यस्ता विरामीलाई म.स्वा.स्व.से./स्वा.सं. किन नपठाउनु भएको सोध्ने र भनेका कुराहरु लेख्ने ।.....

*१४) श्वास प्रश्वासको तालीम लिएपछि हालसम्म ५ वर्षमुनिका कति जना बिरामीलाई उपचारको लागि पठाउनुभयो ? (नम्बर नखुलेमा ✓ गर्ने)

स्वयं सेविका कहाँ स्वास्थ्य संस्थामा अन्य (खुलाउने)

१५) रुघा खोकी मात्रै भएको तर न्यूमोनिया नभएको बच्चा/लाई के गर्नुहुन्छ ?

घरेलु उपचार गर्नु भनेर पठाउँछु

फुकफाक गरिदिन्छु

जडीबुटी दिन्छु (नाम उल्लेख गर्नुहोस्)

अन्य (खुलाउने)

१६) श्वास प्रश्वास सम्बन्धी घरेलु उपचारबारे तपाईंलाई थाहा छ ? छ छैन

१७) थाहा छ भने ती के के हुन् ? (घरेलु उपचार कार्ड देखाउने)

नाक सफा गर्नुपर्छ

न्यानो पारेर राख्नुपर्छ

छिटो छिटो सास फेरेको छ कि छैन हेर्नुपर्छ

कोखा हानेको छ कि छैन हेर्नुपर्छ

दूध खुवाई राख्नुपर्छ

भोल कुरा खुवाइरहनु पर्छ

खानेकुरा दिईरहनु पर्छ

अन्य -खुलाउने)

१८) तपाईंको वडाका महिला स्वास्थ्य स्वयं सेविकालाई चिन्नुहुन्छ ? चिन्दछु चिन्दिनै
(नचिनेमा २२ मा जानुहोस् ।)

१९) तपाईंको वडाको महिला स्वास्थ्य स्वयंसेविकालाई निमोनिया उपचारको लागि तालीम दिई औषधि पनि दिएको छ । यसबारे तपाईंलाई थाहा छ ?

थाहा छ थाहा छैन (थाहा छैन भने प्र.नं. २२ मा जानुहोस् ।)

२०) महिला स्वास्थ्य स्वयं सेविकालाई यसरी तालीम दिई निमोनियाको उपचारमा संलग्न गराएको बारे तपाईंलाई कस्तो लाग्यो ?

धेरै राम्रो म.स्वा.स्व.से. लाई तालीम दिए पनि काम गर्न जदैनन्

स्वास्थ्य चौकी छँदैछ, उनीहरुबाट किन उपचार गराउनु पर्‍यो ?

हामीलाई पनि उपचार गर्ने तालीम दिए हुन्थ्यो

अन्य (खुलाउने)

२१) यो (महिला स्वास्थ्य स्वयंसेविकाबाट निमोनियाको उपचार गर्ने) कार्यक्रमलाई राम्रो बनाउन तपाईंको राय/विचार बारे केही बताउनु हुन्छ कि ?

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

२१) श्वास प्रश्वास रोग नियन्त्रण कार्यक्रम/निमोनियाको उपचार सम्बन्धमा तपाईंको पायक पर्ने स्वास्थ्य संस्थाबाट भै रहेको सेवाबारे तपाईंलाई कस्तो लाग्छ ?

धेरै राम्रो छ औषधि दिदैन
 ठीक छैन अन्य (खुलाउने)

२३) ५ वर्ष मुनिका बच्चालाई भाडा पखाला हुँदा जलवियोजनका के के चिन्हहरू देखिन्छन् ? (भनेको सबैमा चिन्ह लगाउने तर कोट्याई कोट्याई नसोध्ने)

सामान्य अवस्थामा परिवर्तन हुनु आँखा गड्गु
 रूँदा आँखामा आँसु नआउनु मुख/जिब्रो सुक्नु
 प्यास बढी लाग्नु अथवा पिउन नसक्नु
 पेटको छाला तानी छाड्दा विस्तारै/निकै नै विस्तारै फर्कनु
 अरू (जे जे भनिन्छ सबै नछुटाई लेख्ने).....

२४) बच्चालाई भाडा-पखाला लागेर तपाईं कहाँ आएमा के उपचार गर्नुहुन्छ र के के सल्लाह दिनुहुन्छ ?

जीवनजल बनाई खान दिने भन्छु/गरिदिन्छु
 देउताको पूजा गरिदिन्छु वा पूजा गर्न भन्छु
 फुकफाक/ढ्याँग्रो बजाई उपचार गरिदिन्छु
 साविककोभन्दा बढी भोल कुरा खान दिने भन्छु
 साविकभन्ने खाना खान दिइरहन भन्छु ।
 जडीबुटी दिइ खान भन्छु ।
 अन्य (जे जे भनिन्छ सबै नछुटाई लेख्ने)

२५) भाडा-पखाला हुँदा के के चिन्ह/लक्षण देखिएमा अन्य ठाउँमा/स्वास्थ्य संस्थामा उपचारको लागि पठाउनुपर्छ ?

पानी जस्तो पातलो दिसा धेरै पटक भएमा तारन्तार वान्ता गरेमा
 ज्यादै तिर्खा लागेमा खान/पिउन राम्ररी नसकेमा
 ज्वरो आएमा दिसामा रगत देखिएमा
 अवस्था भन भन विग्रँदै गएमा
 अरू (जे जे भनिन्छ सबै नछुटाई लेख्ने)

२६) यो के हो तपाईंलाई थाहा छ ? (जीवनजलको परिया देखाई सोध्ने) छ छैन

धामी भाँक्रीले बिरामी लेखाजोखा गर्दा/अवलोकन फाराम

(शवास प्रशवास/भाडा पखालाको बिरामी भएमा मात्र भर्ने)

जिल्ला : गा.वि.स. वडा नं.

बिरामीको अभिभावकको नाम : अवलोकनकर्ताको नाम :

बच्चाको नाम : उमेर

धामी भाँक्रीको नाम : गा.वि.स. वडा नं. मिति :

१. बच्चालाई के भएको छ ? सोधेको नसोधेको

२. बच्चाको उमेर ? सोधेको नसोधेको

बच्चालाई शवास प्रशवास रोग लागेको बच्चालाई भाडा पखाला भएको

शवास प्रशवास भएमा निम्न कुराहरु भर्ने :

३. निमोनिया/खतराका लक्षण चिन्हहरु हेरेमा/सोधेमा सम्बन्धित ठाउँमा चिन्ह लगाउने ।

छिटो छिटो सास फेरेको

ज्वरो आएको/सिताङ्ग भएको

कोखा हानेको

धेरै सुतिरहने/उठाउन नसक्ने

खान पिउन नसक्ने

कडा कुपोषण

अन्य खुलाउने

४. धामी भाँक्रीले निर्णय गरेको

स्वास्थ्य संस्था/म.स्वा.स्व.से. कहाँ पठाएको

उपचारको लागि पठाउनु नपर्ने

आफैले नै उपचार गरेको

अन्य खुलाउने

५. अन्तवार्ता लिनेको निर्णय

धामी भाँक्रीले गरेको निर्णय सही थियो ? थियो थिएन

कारण लेख्ने

६. उपचारको लागि पठाउनु पर्ने/पठाउन नपर्ने बिरामीलाई घरेलु उपचार बारे सल्लाह

दिएको नदिएको

७. घरेलु उपचार बारे सिकाएको भए के के ? (चिन्ह लगाउने) ।

छिटो छिटो सास फेरेको/कोखा हानेको हेर्ने

आमाको दूध खुवाउने

न्यानो पारेर राख्ने

भोल पदार्थ खुवाउने

खाना खुवाउने

नाक सफा गर्ने

अन्य खुलाउने

माथि भनिए देखि बाहेक धामी भौँक्रीले गरेका/सल्लाह दिएका अन्य कुराहरु भए उल्लेख गर्ने

भाडा पखालाको बिरामी भएमा

द.क. धामी भौँक्रीले दिएको सल्लाह

- | | |
|---|--|
| <input type="checkbox"/> जीवनजल बनाई खुवाउन भनेको/खुवाएको | <input type="checkbox"/> भोलकुरा धेरै खुवाउन भनेको |
| <input type="checkbox"/> खाना खुवाउने सम्बन्धी सल्लाह दिएको | <input type="checkbox"/> फुकफाक गरेको |
| <input type="checkbox"/> जडिबुटी दिएको | <input type="checkbox"/> स्वास्थ्य संस्थामा/म.स्वा.स्व.से. कहाँ पठाएको |
| <input type="checkbox"/> अन्य उल्लेख गर्ने | |

द.ख. खतराको लक्षण/चिन्हहरुको बारेमा जानकारी गराएको

- | | |
|---|---|
| <input type="checkbox"/> पातलो दिशा भैरहेको | <input type="checkbox"/> तारतार वान्ता भएमा |
| <input type="checkbox"/> दिसामा रगत देखिएमा | <input type="checkbox"/> ज्वरो आएमा |
| <input type="checkbox"/> बच्चा भन बिरामी भएमा | <input type="checkbox"/> खाना पिउन नसकेमा |
| <input type="checkbox"/> अन्य (खुलाउने) | |

११. अन्तवार्ता लिनेको निर्णय

धामी भौँक्रीले ठीक गरेको नगरेको

कारण लेख्ने

दुई हप्ताभित्रका तालीमप्राप्त धामी/भाँक्रीले उपचार गर्नेको बाबुसँग लिने प्रश्नावली

Q# 3

जिल्ला : गा.वि.स. वडा नं.

बिरामीको अभिभावकको नाम :

बच्चाको नाम : उमेर.....

धामी भाँक्रीको नाम : गा.वि.स. वडा नं.

१. तपाईंका बच्चाहरु सन्चै छन् ? छन् छैनन्
२. दिन पहिले तपाईंको बच्चा बिरामी भएर तपाईंको गाउँको धामी भाँक्री कहाँ लैजानु भएको कुरा हामीले सुन्यौं के यो ठीक हो ? हो होइन
३. त्यतिबेला तपाईंको बच्चालाई के भएको थियो ? (लक्षण/चिन्हहरु अभिभावकले भने अनुसार लेख्ने)
४. धामी भाँक्रीले कसरी/के के गरी उपचार गर्नु भयो ? (भनेका कुराहरु लेख्दै जाने)
५. धामी भाँक्रीले तपाईंलाई के के सल्लाह दिनुभएको थियो ? (भनेका कुराहरु लेख्दै जाने)
६. धामी भाँक्रीले तपाईंको बच्चालाई उपचारको लागि स्वास्थ्य संस्था/म.स्वा.से. कहाँ उपचारको लागि पनि जान भन्नुभएको थियो कि ? थियो थिएन
७. कहाँ लैजाने सल्लाह दिनुभएको थियो ? म.स्वा.से. स्वा.सं. औषधि पसल अन्य खुलाउने
८. तपाईंले उपचारको लागि लैजानु भयो त ? लगें लगिनँ
९. बच्चालाई अहिले कस्तो छ ? ठीक छ/निको भयो बिरामी नै छ अन्य खुलाउने
१०. तपाईंको वडाको महिला स्वास्थ्य स्वयंसेविकालाई चिन्नुहुन्छ ? चिन्छु चिन्दिनँ
११. तपाईंको वडाको महिला स्वास्थ्य स्वयंसेविकाले निमोनियाको उपचार गर्ने बारे तपाईंलाई थाहा छ ? (म.स्वा.से. लाई चिन्ने भएमा) छ छैन
१२. स्वयं सेविकाले यसरी उपचार गरेको तपाईंलाई कस्तो लाग्छ ? (थाहा भएमा) धेरै राम्रो ठीकै ठीक छैन थाहा छैन अन्य खुलाउने
१३. अब फेरि तपाईंको बच्चालाई पहिले जस्तै बिरामी (श्वास प्रश्वास सम्बन्धी) भएमा उपचारको लागि कहाँ लैजानु हुन्छ ? धामी भाँक्री म.स्वा.से. स्वास्थ्य संस्था अन्य.....

स्वास्थ्य संस्थाको लागि प्रश्नावली

जिल्ला : स्वास्थ्य संस्था. गा.वि.स. वडा नं.
 अन्तरवार्ता दिने व्यक्तिको नाम : दर्जा :
 अन्तरवार्ता लिने व्यक्तिको नाम : मिति :

१. तपाईंको गा.वि.स. को केही धामी भौँकीलाई गत वर्ष श्वास प्रश्वास/भाडापखाला बारे छोटो तालीम दिइएको कुरा तपाईंलाई थाहा छ ? थाहा छ थाहा छैन
२. तपाईं कहाँ धामी भौँकीले उपचारको लागि बिरामी पठाउँछन् ? पठाउँछन् पठाउँदैनन्
३. पठाउँछन् भने एक महिनामा सालाखाला कति (संख्यामा लेख्ने)
४. कस्तो बिरामी पठाउने गरेका छन् ? _____
(भनेको सबै रोगको नाम/लक्षणहरू लेख्ने)
५. तालीम प्राप्त कुनै धामी भौँकीलाई तपाईंले आजसम्म भेट्नु भएको छ ? छ छैन
६. भामी भौँकीलाई तालीम दिइएको बारे तपाईंको धारणा/विचार के छ ?
 धेरै राम्रो किन
 ठीकै छ किन
 केही काम छैन किन

Agenda of Interviewer Orientation

Annex - 4

Day 1

- | | | | |
|----|---|---|------------|
| 1. | Introduction of the participants | - | 15 minutes |
| 2. | Explain the purpose of the meeting | - | 15 minutes |
| 3. | General overview of the ARI and D/J orientation program | - | 30 minutes |
| 4. | Explain the basics of carrying out a survey | - | 30 minutes |
| 5. | How to proceed with the D/J survey | - | 30 minutes |
| 6. | Questionnaire review by the participants | - | 90 minutes |
| | Break | - | 30 minutes |
| 7. | In-depth review of questionnaires | - | 120minutes |
| 8. | Role-play between the interviewer and interviewee | - | 30 minutes |
| 9. | Feedback about the role play | - | 30 minutes |

Day 2

- | | | | |
|-----|---|---|------------|
| 10. | Field practice and questionnaire pretesting | - | 180 minute |
| 11. | Feedback on the field activity/questionnaire revision | - | 60 minutes |
| | Break | - | 30 minutes |
| 12. | Preparation for departure to the field | - | 120minutes |

Dhami/Jhankris interviewed by VDC
District - Makwanpur

A. Oriented

1. Lal Singh Ghlan	- Katunje	2. Sanu Ghising	- Epa Panchkanya
3. Gajab Singh Ghlan	- Budichaur	4. Bahadu Singh Gole	- Sarikhet
5. Prithvi Bdr. Ghlan	- Sarikheti	6. Uday B. Thing	- Raksirang
7. Mani Raj Rumba	- Namtar	8. Sanchar Sing Syangtan	- Tistung
9. Ratna Bdr. Gopali	- Chitlang	10. Kanchha Thing	- Markhu
11. Ek Bdr. Gole	- Kulekhani	12. Shyam B. Ale	- Kogate
13. Sher Bdr. Garanja	- Kogate	14. Surendra Khadka	- Ipa
15. Tasbir Rayamajhi	- Daman	16. Mel B. Thing	- Dandakharka
17. Indra Bir Thing	- Dandakharka	18. Sundar Lal Giri	- Gogane
19. Rishi Ram Pudasaini	- Bhimphedi	20. Govinda B. Upreti	- Manahari
21. Sukra Bdr. Praja	- Bharta	22. Khadga B. Muktan	- Khairang
23. Ram Bdr. Thapa	- Daman	24. Sitaram Thapa	- Palung
25. Raju Man Muktan	- Dandakharka	26. Ram Cheli Praja	- Bharta
27. Man Bdr. Thing	- Kankada	28. Gopal Lama	- Daman
29. Ruppal Bdr. Syangtan	- Kankada	30. Bhakta Bdr. Blon	- Basamadhi
31. Chandra Bdr. Ghlan	- Padampokhari	32. Lal B. Rumba	- Padampokhari
33. Padam Dhar Aryal	- Hatiya	34. Nera Pd. Timsina	- Hatiya
35. Keshar Sing Waiba	- Churemai	36. Krishna B. Biswakarma	- Nibuwatar
37. Bir Bdr. Bhomjan	- Nibuwatar	38. Harka B. Pakhrin	- Harnamadhi
39. Sita Ram Neupane	- Harnamadhi	40. Dil B. Biswakarma	- Nibuwatar
41. Dil Bdr. Pakhrin	- Phaparbari	42. Bakhat Bdr. Rai	- Rai Gaun
43. Krishna Bdr. Jimba	- Katunje	44. Durga Pd. Humagain	- Gadhi
45. Kedar Nath Sapkota	- Gadhi		

B. Non-oriented

1. Kamal Bdr. K. C	- Daman	2. Ram Bdr. Syangtan	- Tistung
3. Jaya Ram Thing	- Namtar	4. Tek Bdr. Bal	- Raksirang
5. Mukti Lal Muktan	- Sarikhet	6. Ram Singh Ghlan	- Budichaur
7. Bhakta Bdr. Bhomjan	- Budichaur	8. Prithi Man Ghising	- Dandakharka
9. Kaman Sing Thing	- Khairang	10. Ramji Karki	- Daman
11. Hajur Sing Thing	- Dandakharka	12. Padam Lal Syangtan	- Kankada
13. Bhim Bdr. Thapa	- Palung	14. Prem B. Praja	- Bharta
15. Ram Bdr. Syangtan	- Kankada	16. Khadga B. Thapa	- Padampokhari
17. Hira Lal Rumba	- Basamadhi	18. Chandra B. Thing	- Basamadhi
19. Mani Ratna Chaulagain	- Gadhi	20. Dhruva Pd. Devkota	- Gadhi
21. Hasta Bdr. Gole	- Gadhi	22. Lal B. Pariyar	- Padampokhari
23. Prem Bdr. Gole	- Padampokhari	24. Man B. Thing	- Padampokhari
25. Man Bir Ghlan	- Padampokhari	26. Tulsi Pd. Adhikari	- Hatiya
27. Ram Pd. Chaurel	- Hatiya	28. Ram B. Biswakarma	- Nibuwatar
29. Krishna Bdr. Bhujel	- Churemai	30. Hari Pd. Ghimire	- Nibuwatar
31. Jagat Bdr. Bhomjan	- Nibuwatar	32. Mahendra Pd. Paudel	- Harnamad
33. Yadu Nath Pudasaini	- Harnamadhi	34. Suk Ram Sintan	- Phaparbari
35. Buddha Bir Rai	- Rai Gaun		

District - Jhapa

A. Oriented

1. Dhana Lal Rajbanshi	- Baluwadi	2. Tara Gautam	-Arjundhara
3. Dashu Lal Sharma	- Kohabara	4. Sah Dev Rajbanshi	-Charpane
5. Dadhi Ram Shivakoti	-Sarnamati	6. Til B. Khati	-Dangibari
7. Khadga Bahadur Karki	-Sarnamati	8. Umaram Shivakoti	-Garamani
9. Dhan Bdr. Biswakarma	-Dhaijan	10. Chandra B. Tamang	-Shantinagar
11. Padma Lal Biswakarma	Garamani	12. Shree Prasad Basnet	-Goldhap
13. Dev Bdr. Limbu	-Prithvinagar	14. Laghudhan L. Rajbanshi	-Baniyani
15. Dal Bdr. Limbu	-Maheshpur	16. Siru Rajbanshi	-Rajgadh
17. Shyam Kr. Biswakarma	Maheshpur	18. Pachkatu Ganesh	-Pathamari
19. Dhan Bdr. Rai	-Haldibari	20. Thahar M. Thamsuhang	-Balubadi
21. Hirachan Rajbanshi	-Jyamirgadhi	22. Brihaspati Paudel	-Bahundangi
23. Pratiman Mishra	-Surunga	24. Bishnu Pd. Sangraula	-Surunga
25. Laya Pd. Shivakoti	-Ghailadubba	26. Radhika Niraula	-Korobari
27. Agni Pd. Kharel	-Gauradha	28. Bhim B. Khulal Chhetri	-Gauradaha
29. Binod Subedi	-Topgachhi	30. Sani Lal Rajbanshi	-Juropani
31. Dadhi Ram Neupane	-Khudunabari	32. Hulaki Thapa	-Satasidham
33. Chandan Rajbanshi	-Duwagadhi	34. Hari Pd. Bhandari	-Duwagadhi

B. Non-oriented

1. Dilli Bdr. Dangi	-Duwagadhi	2. Dilli Ram Oli	-Duwagadhi
3. Resham Lal Tajpuria	-Kohobara	4. Kali Pd. Rajbanshi	-Charpane
5. Dilli Ram Rai	-Satasidham	6. Karbir Lohar	-Khudunabari
7. Gopi Chandra Adhikari	-Dhaijan	8. Nethu Lal Rajbanshi	-Juropani
9. Tanka Timsina	-Topgachhi	10. Bijuli Biswakarma	-Gauradha
11. Pabitra Devi Dahal	-Korobari	12. Tikaram Niraula	-Ghailadubba
13. Mohan Pd. Pandey	-Surunga	14. Nanda Lal Pokharel	-Surunga
15. Dambar Bdr. Shrestha	-Bahundangi	16. Rudra Bdr. Niraula	-Kerobari
17. Paban Lal Ganesh	-Pathamari	18. Peltu Rajbanshi	-Haldibari
19. Padam Pd. Chaudhari	-Jajgadh	20. Bhakta Bdr. Phembu	-Maheshpur
21. Dhan Bdr. Bhujel	-Balubadhi	22. Chamatu Lal Rajbanshi	-Baniyani
23. Tulsi Ram Pathak	-Goldhap	24. Rajman Tamang	-Prithvinagar
25. Devi Pd. Pathak	-Garamani	26. Hari Pd. Sangraula	-Garamani
27. Mukhiya Magar	-Dangibari	28. Dambar Kumar Shrestha	-Jyamirgadhi
29. Ganga Bdr. Biswakarma	-Shantinagar	30. Pani Lal Rajbanshi	-Dangibari
31. Laxmi Pd. Shivakoti	-Gauradha		

List of Participants at the Orientation

Venue: Hetauda
Date: 25-26 March, 1999

1. Dr. Penny Dawson - Team Leader, JSI
2. Mr. Kumar Lamichhane - Program Officer, JSI, Kathmandu
3. Mr. Sushil Karki - Computer/Information Officer, JSI, Kathmandu
4. Mr. Dev Dhoj Karki - Senior Child Health Field Officer, JSI, Hetauda
5. Mr. Mana Chamling - Child Health Field Officer, JSI, Hetauda
6. Mr. B. B. Karki - ACHFO, JSI, Hetauda
7. Mr. Dwarika Nath Pradhan - AHW, Chitlang Sub-Health Post, Makwanpur
8. Mr. Madhusudan Neupane - VHW, Makwanpur Health Post, Makwanpur
9. Mr. Puskal Dhakal - VHW, Nibuwater Sub-Health Post, Makwanpur
10. Mr. Kalu Singh Magar - VHW, Padampokhari Health Post, Makwanpur
11. Mr. Rajendra Kumar Karki - Co-ordinator for the evaluation program
12. Ms. Indira Srivastava - Student of Cornell University, USA.
13. Mr. Bhuvan Upreti - Interpreter for Ms. Indira Srivastava

Venue: Biratnagar
Date: 11-12 April, 1999

1. Mr. Hira Tiwari - Child Health Field Officer, JSI, Biratnagar
2. Mr. Rudra Khatiwada - VHW, Rajgadh Health Post, Jhapa
3. Mr. Upendra Kumar Pokharel - VHW, Duwagadhi Sub-Health Post, Jhapa
4. Mr. Ek Raj Bhandari - VHW, Jhapa
5. Mr. Rajendra Kumar Karki - Co-ordinator for the evaluation program
6. Ms. Indira Srivastava - Student from Cornell University, USA.
7. Mr. Bhuvan Upreti - Interpreter for Ms. Indira Srivastava

Glossary of Nepali Terms

- achheta phyakne* - throwing away of uncooked rice after moving it around the body of the patient by a traditional healer for the purpose of doing away with the evil spirit which is supposed to have caused the illness
- dhami/jhankri* - traditional healer
- phukphak* - *phukphak* includes blowing on the patient and chanting mantras. This is supposed to remove the evil spirit from the body
- rugaa/khoki* - cough/cold
- terai* - flatland in the southern part of the country bordering India