Focused Ethnographic Study

on Acute Respiratory Infection (ARI)

among children

By Solutions Consultant (P.) Ltd.

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REPORT

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Solutions Consultant P. Ltd.

Dr. Vijaya L. Shrestha

Madhusudan Sharma Subedi

Subas Risal

Ashish Shrestha

LIST OF ABBREVIATIONS

AHW	Auxiliary Health Worker
ARI	Acute Respiratory Infections
CBAC	Community-Based ARI/CDD
CDD	Control of Diarrheal Disease
CDP	Community Drug Program
Cotrimoxazole-P	Cotrimoxazole-Pediatrics
DHO	District Health Office
DoHS	Department of Health Service
DPHO	District Public Health Office
FCHV	Female Community Health Volunteers
FGD	Focused Group Discussion
HF	Health Facility
HMG	His Majesty's Government
HMIS	Health Management Information System
HP	Health Post
IDI	In-Depth Interview
IMCI	Integrated Management of Child Illness
JSI	John Snow, Incorporated
MCHW	Maternal and Child Health Worker
MOH	Ministry of Health
NFHP	Nepal Family Health Program
ORS	Oral Rehydration Salts
PHC	Primary Health Care Center
SHP	Sub-Health Post
TBA	Traditional Birth Attendant
UNICEF	United Nations Children's Fund
URI	Upper Respiratory Infection
USAID	United States Agency for International Development
VDC	Village Development Committee
VHW	Village Health Worker
WHO	World Health Organization

EXECUTIVE SUMMARY

i. Introduction

Acute Respiratory Infection (ARI) in Nepal continues to be one of the major causes of childhood morbidity and mortality. A child may have as many as five episodes in a year, most of which are simple cough and cold. Without proper home care, however, cough and cold may develop into pneumonia which, unless treated early and appropriately, can be fatal in young children. The majority of deaths in children less than 5 years suffering from ARI are caused by pneumonia.

A focused ethnographic study was conducted to explore recognition and interpretation of ARI signs and symptoms by mothers and management of ARI at household and community levels. The study also focused on sequence of care seeking practices in these communities. Additionally, the study also dealt with the perception of the mothers towards various health care facilities.

ii. Methodology

The study was carried out in four districts: Morang, Sunsari, Makwanpur and Chitwan to cover five different caste/ethnic groups. In Morang and Sunsari districts, three study sites (VDCs) were selected. In these districts, Tharu, Musahar and Muslims were selected as study population. Similarly, in Chitwan and Makwanpur, two study sites (VDCs) were selected to carry out research with Brahmin/Chhteri and Tamang. The study sites (VDCs) were selected based on concentration of study groups and safe accessibility.

Study sample comprised of 198 mothers with children below 5 years of age; 70 mothers having children with past ARI episodes; 30 mothers with sick babies 6 months old and below; and 43 health care providers.

Methodology included a series of Focus Group Discussions (FGD) and In-depth interviews followed by presentation of hypothetical case scenarios. A variety of service providers consulted by respondent mothers including FCHVs, private practitioners, care

providers at government health facilities and traditional healers were interviewed using a set of structured interview checklists.

iii. Major Findings

The findings summarized below, show that the response patterns with some exceptions is generally similar across all the caste/ethnic groups.

- A revealing change noted from that of 1994 study is that most of respondent mothers were familiar with symptoms of pneumonia and its severity.

- All mothers recognized the various types and stages of ARI related illness i.e. cold, cough and pneumonia and signs and symptoms of each type, for which each caste and ethnic group had its own terms and expressions.

- Mothers were aware that cold and cough can develop into pneumonia if proper care was not taken. Almost all the mothers in all communities also believed that most ARI illnesses are seasonal and "*purbiya*" (easterly wind) also causes ARI problems.

- Mothers were able to describe the symptoms of pneumonia and severity of illness. Difficult or fast breathing is perceived as one of the symptoms of early stage of pneumonia but warranted medical attention only if accompanied by one or more other symptoms such as high fever, convulsions, restlessness, lethargy, excessive sleepiness and chest in drawing, loss of appetite and cold body.

- Common ARI illness such as cough and cold including mild fever were not considered as serious and were treated with traditional home medications , such as

    - keeping the child warm, chest in particular,
    - specially prepared hot drink,
    - Massage on scalp and chest with specially seasoned mustard oil.

- Only if the problem persisted for more than 3-4 days other kind of help were sought. But in case of infants, most

mothers sought for immediate medical care.

- All the mothers believed that evil spirits, angry deities and clan god (kul devta) may also be the reasons which caused illness to children including ARI. Almost all the mothers performed special rituals annually, to appease the spirits and the deities as a preventive measure. Should the children fall sick-ARI or other reasons - a practice to call traditional healers to ward off evils was prevalent before seeking other help. This practice was more prevalent among Tharus, Tamangs, Muslims and Musahar mothers.

- Dietary and fluid restriction was observed by most breast feeding mothers when their child suffered from ARI. This practice was also found common for other illnesses. Likewise, children suffering from ARI were not given chilly hot, oily and spicy food.

- Mothers belonging to Brahmin/Chhetri and Tharu community were relatively quick in approaching the health care providers as compared to mothers from other communities. Mothers belonging to Musahar community reported to wait for 4-5 days while treating the child with home remedies before visiting medical practitioners.

- In case of ARI illnesses considered not severe, the practice of self-medication was found very common among the mothers. If simple medication did not help they often administered antibiotics (available in all drug stores) on their own. It was seen that such practice was more common with Tharu, Musahar and Muslim mothers.

- Traditional healers have very important place in these communities. The mothers did not rely entirely on traditional healers, nevertheless they sought their help prior to and/or simultaneously other health care providers.

- It was found that most of the mothers did not really understand antibiotics though they had given it to their child. For them it is a medicine that is effective in improving the conditions of their child. Mothers reported to have bought it repeatedly when similar problem occurred. It was also found

that most mothers stopped the medicine as soon as the health of the child improved and saved remaining medicine for future use.

- Female Community Health Volunteers (FCHVs) were generally found to be effective in advising mothers on essential care practices as well as management of simple ARI problems. All the same, in some communities mothers were not aware of FCHVs. While young and educated mothers (Brahimin/Chhteri and Tharu) had low opinion about FCHVs.

- Mothers' perception regarding the severity of illness determined the type of care sought. However, in order of priority, after home remedy, consultation with traditional healers and self-medication was preferred by the mothers. It was also seen that the mothers preferred the drug stores and the private clinics compared to the health posts. Mothers reported a visit to hospital only as the last resort.

- The health seeking behavior of mothers for their sick child varied from one caste/ethnic group to another. Moreover, it was also found that the economic status of the family, educational status of the mothers, accessibility of the health facilities greatly influenced type and when to seek help.

This study clearly shows degree of variation on care seeking practices among different caste/ethnic groups. It was also found that the care seeking practices differed within the same caste/ethnic groups. There are certain factors that facilitated or hindered seeking care from medical practitioners and health care providers;

- Awareness and knowledge level of mothers on danger signs impact the lag time between child developing and illness and seeking health care from health practitioners. Lesser the knowledge, longer was the time lag.
- Education status of the mothers was an important factor in determining how prompt the mothers seek health care from the health care providers. Though not universally true, more educated mothers (combined with awareness on danger signs) were seen to be more prompt on consulting and visiting health care providers, than illiterate one.

- Economic condition of the family also was found to be a major factor that affected the care seeking behavior. Financial constraints normally prevented families (mothers) from seeking immediate care from health care providers. Usual practice was to wait for home therapy to cure the illness.
- Distance and accessibility to health care providers was an important factor in determining timing of seeking care and the choice of health care providers. Health providers in near vicinity usually meant the consultation was much more immediate, however it was also seen that the limited working hours of public health facilities worked as disincentive for mothers to seek care from them.
- The belief and trust on traditional healers and practices (including home therapies) also was found to be a crucial factor in care seeking behaviors of the mothers. The more "perceived" knowledge and trust on traditional home therapies (not always helpful) meant greater time lag in seeking care from health care providers.
- It was also observed that one of the most important factors was the age of the sick child. It was observed that lesser the age of the child more sensitive were the mothers in consulting and visiting health care providers.

CHAPTER I: INTRODUCTION

1.1. Background

Acute Respiratory Infection (ARI) is considered to be one of the major killers of children worldwide, particularly in developing countries. About four million deaths are caused by ARI worldwide (WHO 1997) and in South East Asia alone, every year 1.04 million children die of ARI (Onta and Yengden 2003). In Nepal, ARI is one of the major causes of childhood morbidity and mortality, with an episode of 4-6 times per year per child (Sharma and Tuladhar 1990, quoted in Onta and Yengden 2003:5). The prevalence of ARI is estimated to be about 38 percent among the children below two years of age and 26 percent among the children from two to five years of age (MoH 1997). The problem magnitude and management of ARI in Nepal differs by ecological region, caste/ethnic group and economic status.

The Nepal Demographic Health Survey 2001 estimated infant mortality to be 64 per 1,000 live births. The high mortality rate is attributed to numerous factors. Childhood pneumonia is the leading cause of death of children under 5 years old. Nepal's low treatment rate of expected pneumonia cases is to blame for high fatality rates. Only 15%-18% of all pneumonia cases are brought by caretakers to Health Facilitiess, according to HMIS estimates (JSI, WHO and UNICEF, 2002).

The Ministry of Health (MoH) recognizes that ARI is one of the major public health problems in Nepal among children less than 5 years of age. The National Control of ARI Program is an integral part of primary health care and has been accorded high priority. The program recognizes the important role of mothers and other care takers in identifying type and severity of ARI and appropriate management including the need for home care and need for referral to health facilities. The main objective of ARI program is to reduce under five ARI related morbidity and mortality and to improve the situation of child health status in Nepal.

The MOH started the FCHV program in 1989/1990 to increase community participation in basic primary health care. FCHVs were selected and trained to deliver health education and primary health care services to women and children in their community. Their activities included distribution of iron tablets, vitamin A

capsules, ORS packets, and condoms, re-supply of birth control pills to women and ARI treatment or referral. FCHVs were given basic training that enabled them to give advice on family planning, nutrition, and basic preventive measures for diseases such as diarrhea. Distribution of iron tablets and ARI treatment were not initially part of the FCHV duties; they were recent additions after studies (**A short history of Nepal's Community-Based Pneumonia Program**, JSI 2001) showed FCHVs could treat ARI and distribute iron tablets to pregnant women. In 1991, FCHVs were used for community-based treatment of pneumonia in Chitwan District. FCHVs were trained to follow WHO guidelines in differentiating pneumonia and severe pneumonia. Pneumonia was treated with Cotrimoxazole and severe pneumonia was referred to Health Facilities. An evaluation of this program raised concerns about the training and supervision being inadequate. In light of these concerns, the next couple of years were devoted to development of training materials and methods for all levels of training from the Health Facilities staff to FCHVs.

The ARI strengthening program as a community level intervention strategy was introduced initially in 1995 in four selected districts—Morang, Sunsari, Makwanpur and Chitwan in collaboration with USAID/JSI, UNICEF and WHO. To address questions about FCHVs ability to treat pneumonia or simply refer them to Health Facilities, models were chosen: treatment and referral. In the treatment model, FCHVs could prescribe Cotrimoxazole-P and in the referral model FCHVs would refer pneumonia patients to the nearest Health Facilities. Makwanpur and Chitwan were chosen as Treatment Districts and Morang and Sunsari as Referral Districts. The huge success of this program, especially in the Treatment Districts, prompted the 1997/98 conversion of the 2 Referral Districts into Treatment Districts. By 2000, this program was implemented in 14 Districts. In these districts FCHVs were trained to recognize sign and symptoms of pneumonia and authorized to treat with Cotrimoxazole-P and refer severe pneumonia cases to health facilities.

In 1997 with the support of WHO and in collaboration with other international organizations ARI/CDD section of Child Health Division introduced IMCI strategy for the first time in Nepal. Before that CHD/ DoHS has been implementing Community Based ARI and CDD (CBAC) program in combination with nutrition and immunization. In the beginning IMCI was piloted in Mahottari

district where a series of orientations at district, Village Development Committees (VDCs) level were conducted. After the evaluation of the strategy in 1998 and its success IMCI was extended to three more districts Kanchanpur, Nawalparasi and Bardiya in 1999 with community component and renamet as Community Based-IMCI. By 2002 CB-IMCI was expanded to 13 districts.

According to Child Health Division and WHO, the impact of CBAC/ IMCI Program is found very impressive. With the success of IMCI in these 22 districts Child Health Division has planned to expand it in other districts too.

Understanding of local ARI management practices including perceptions and terminology will greatly increase the effectiveness of ARI program. In this context, a focused ethnographic study was carried out among five different caste/ethnic groups to find out their perception; understanding and care seeking practices related to ARI, in particular pneumonia.

1.2. Objectives of the Study

The overall purpose of this Focused Ethnographic Study was to identify the terms used locally by the mothers to describe respiratory illnesses among children and to determine whether they recognize the key symptoms of ARI in particular pneumonia including severity of the problem. The study also collected information on the mothers' perceptions and existing ARI management practices in order to improve communication between health care providers and mothers.

The specific objectives as outlined in the Terms of Reference were:

- To identify local terminology, signs and symptoms by which mothers and caretakers of different ethnic groups recognized an illness that correlated with clinically diagnosed pneumonia or other ARI;
- To identify the beliefs, knowledge and practices of mothers and caretakers on the use of home remedies, medications, feeding practices and other aspects of home

care of children ill with pneumonia or other ARI;

- To identify factors that facilitate or hinder prompt care-seeking by mothers and caretakers from medical practitioners, health care providers, and others;

- To identify the expectations of mothers and caretakers concerning antibiotics and other drug therapies and to anticipate common problems affecting compliance with treatment.

CHAPTER II: METHODOLOGY

Focused ethnographic study using various qualitative data collection tools and techniques, information on different aspects of ARI and management practices of mothers were elicited. The study was carried out in four districts—Morang, Sunsari, Makwanpur and Chitwan. Altogether five caste/ethnic groups were selected as study population - Brahmin/Chhetri, Tamang, Tharu, Musahar and Muslim.

2.1. Sampling Design

Initially, two sites (VDCs) were proposed within a district. However, in the process of carrying out the field investigation, the study team at Morang district came across with Musahar community, one of the socially and economically disadvantaged groups in Nepal and felt the need of involving them as well. Hence the study included five caste/ethnic groups covering 3 VDCs each from Morang and Sunsari and 2 each from Makwanpur and Chitwan. Altogether 10 VDCs were covered by the study.

The following criteria were used to select the study sites:

- Should be representative of the most populous ethnic groups;
- Should have a government health facility;
- Is accessible and safe to travel.

2.1.1. Selection of study groups

The study groups comprised of following categories:

- Mothers of children below five years of age;
- Mothers with experience of past ARI episodes in their children;
- Mothers/caretakers currently with sick child below 6 months of age;
- Health care providers (formal/informal, private/public),

traditional healers, drug store.

In each study community, a broad list of prospective mothers with children under five years of age was prepared with the help of respective FCHV. From the list, required number of mothers was randomly selected for Focus Group Discussions (FGD) and In Depth Interviews (IDI). A separate list of mothers having children with an episode of ARI and another list of mothers with currently sick babies were also prepared for the purpose of this study. Prior consent was obtained before the final selection of mothers for study.

A total of 298 mothers from Tharu, Musahar, Muslim, Brahmin/Chhetri and Tamang communities comprised respondents for the study.

Table 1. Respondents by District, Caste/ Ethnic Group and Type

District	Caste/ Ethnicity	FGD respondents	Respondent mothers with sick child < 6 months	Mothers with children with ARI episode	Total
Morang and Sunsari	Tharu	39	6	14	**59**
	Musahar	38	6	14	**58**
	Muslim	39	6	14	**59**
Makwanpur	Brahmin/ Chhetri	43	6	14	**63**
Chitwan	Tamang	39	6	14	**59**
Total		**198**	**30**	**70**	**298**

From the mothers who agreed to participate in the study, a list of the health care providers whom they most frequently consulted for ARI and other health problems were identified which included traditional healers, government level care providers, private practitioners and drug store level providers. Total sample consisted of 43 health care providers.

Table 2. Number of Health Care Providers by District and Type.

District	FCHVs	VHW/AHW/ MCHW	Private Practitioners/ Drug Stores/	Total
Morang	6	2	4	**12**
Sunsari	6	8	1	**15**
Makwanpur	2	4	2	**8**
Chitwan	4	2	2	**8**

Total	**18**	**16**	**9**	**43**

2.2. Data Collection Methods and Instruments

A combination of qualitative research techniques were used to collect the relevant information. Focus Group Discussions, informal dialogue, presentation of hypothetical case scenarios, narration of past episode of ARI and in-depth interviews were used to elicit data.

Focus Group Discussions (FGD) with mothers

FGDs were conducted with the selected mothers with children under five and five years of age. FGDs were used at the household/ individual and community levels to generate ARI related information on social/cultural norms, values, beliefs, experiences, knowledge on and ARI management including health seeking behaviors. Each FGD session comprised of 6-11 participants and was conducted using a FGD guide and a checklist.

The FGD session on ARI included:

- Free listing of common diseases in children;
- Discussion geared towards explanatory model; local terms; care-seeking behaviors including home treatment practices for ARI;
- Presentation and discussions on hypothetical case scenario to ascertain mothers' recognition of signs and symptoms and management practices, sequence of care seeking;
- Preference and restriction on food by mothers as well as breast feeding mothers;
- Selection of different types of healers and its sequence of care sought;
- Knowledge about antibiotics.

Focus Group Discussions with caretakers

Since the concept of the caretakers was not prevalent in the study

areas (mothers were the only one responsible for the care of the children, in particular the sick children), it was not possible to carry out the proposed number of FGD with caretakers.

In- depth interviews

In-depth interviews were carried out among the mothers with experience of past ARI episodes among their children. The interviews were conducted using pre-structured interview guidelines focused on recognition of signs and symptoms of ARI, management practices and their health seeking behavior. In addition, narratives of past ARI episodes of their children were elicited.

Similarly, in-depth interviews were carried out among the mothers having a sick child under the age of six months. The interviews were focused on the present health situation of the child, the health care practices and usage about the medicine and food the respondents were giving currently.

Interviews and interactive dialogues with health care providers

Interviews and interactive dialogues were conducted among the following type of health care providers:

- Government health facilities i.e. AHW, VHW, MCHW
- Private medical practitioners
- Traditional healers
- FCHVs
- Drug store level care providers

The interviews were focused on understanding and their assessment on the prevalence of ARI related knowledge, attitude and treatment practices on ARI in particular pneumonia.

2.3. Limitation of the Study

Nepal is mosaic of caste and ethnicity, each having its own tradition, culture and language. This study covered only five caste/ethnic groups, which may not be appropriate to make generalization for all caste/ethnic groups. Nevertheless, ethnographic studies do reveal the current trend gaps and emerging patterns in developing society which may be applicable to all in terms of definitive indicators in the changing context.

CHAPTER III: FINDINGS AND DISCUSSIONS

3.1. Background Characteristics

Altogether 298 mothers with children below five years of age were included in the focused ethnographic study. Respondent mothers represented five different communities viz. Brahmin/Chhetri, Tamang, Tharu, Musahar and Muslim. Mothers between 21 to 25 years of age formed the largest group of the respondent. The mean age of respondents was 25.7 years (see Table 3).

Of the total respondents 147 were literate and the rest were illiterate. Among the literate respondents 48 had school education, while 10 were high school graduates and only 2 had completed intermediate level.

The source of livelihood for majority of the respondents was agriculture followed by wage labor, agriculture and service. Except Musahar and Muslim mothers, most reported that income through service or agriculture or both was enough to meet household expenses.

Age at marriage for most of the respondents was between 16-20 years. Similarly, Most of the respondents also had their first child between 16-20 years of age. (Table 3)

Table 3. Background Characteristics of the Respondents

Age	Brahmin/ Chhetri	Musahar	Muslim	Tamang	Tharu	Total
16-20	7	14	13	13	12	**59**
21-25	38	22	21	18	22	**121**
26-30	15	16	15	19	12	**77**
31-35	2	2	6	7	6	**23**
36+	1	4	4	2	7	**18**
Total	**63**	**58**	**59**	**59**	**59**	**298**

Educational Level	Brahmin/ Chhetri	Musahar	Muslim	Tamang	Tharu	Total
Illiterate	11	43	44	31	22	**151**
Literate	19	15	15	9	29	**87**
School Education	24	0	0	19	5	**48**
SLC Graduate	7	0	0	0	3	**10**
Intermediate	2	0	0	0	0	**2**

Total	**63**	**58**	**59**	**59**	**59**	**298**

Sources of Livelihood	Brahmin/ Chhetri	Musahar	Muslim	Tamang	Tharu	Total
Agriculture	36	0	2	24	35	**97**
Agriculture + service	19	0	1	9	19	**39**
Agriculture + Wage labor	0	12	12	6	0	**30**
Skilled Worker	0	0	12	14	0	**26**
Service	17	0	1	4	3	**25**
Wage Labor	0	46	31	2	2	**81**
Total	**63**	**58**	**59**	**59**	**59**	**298**

Age at Marriage	Brahmin/ Chhetri	Musahar	Muslim	Tamang	Tharu	Total
< 16	8	7	13	10	7	**45**
16-20	48	51	44	43	47	**233**
21-25	7	0	2	6	5	**20**
Total	**63**	**58**	**59**	**59**	**59**	**298**

Age at birth of first child	Brahmin/ Chhetri	Musahar	Muslim	Tamang	Tharu	Total
15	4	2	2	1	4	**13**
16-20	41	51	50	46	37	**225**
21-25	18	4	6	12	13	**53**
26+	0	1	1	0	5	**7**
Total	**63**	**58**	**59**	**59**	**59**	**298**

No. of Children	Brahmin/ Chhetri	Musahar	Muslim	Tamang	Tharu	Total
1-2	47	30	23	37	46	**183**
2-4	15	23	24	19	10	**91**
5+	1	5	12	3	3	**24**
Total	**63**	**58**	**59**	**59**	**59**	**298**

Similarly interviews and interactive dialogues were conducted with different health care practitioners including the traditional healers. The interviews were focused on assessing their knowledge and practices on ARI including pneumonia management. In addition their perception on mothers' ARI treatment practices, use of antibiotics and reasons for visiting health care providers were also discussed.

3.2. Recognition and interpretation of ARI signs and Symptoms

Each ethnic group had different terms and expression to recognize and interpret ARI signs and symptoms. (See Box 1)

3.2.1. Cold

Cold was considered as the common illness among children which may cause frequent **sneezing, blocked** or **running nose** and sometime **difficulty in breathing**. For example, Brahmin/ Chhetri mothers in Chitwan believed that ***"rugha"*** **takes 7 days to get cured without medicine and still takes a week to be cured if medicine was taken** and hence was not considered serious enough to warrant an immediate medical attention.

Mothers frequently cited cold wind, use of excessive cold water and breast-feeding mothers or children eating cold food and change in weather as some of the causes of cold. Mothers believed that home remedies can cure cold within a few days.

3.2.2. Cough and Cold

Most of the FGD participants felt that it was very normal for the child to suffer from cough and cold and did not require medical intervention. Unable to hold back the mucous and cough were considered as the symptoms of cough and cold.

They believed that keeping the child warm, applying *"Vicks"*[1], oil massage, frequent drink of boiled water, specially prepared hot drinks to soothe the throat, warm food to the child will cure cough and cold. Most of the mothers especially among the Tharu, Musahar and Muslims communities resorted to self medication if the symptom continued for 2 days or more (either bought or administered medicine kept at home i.e. Paracetamol and cough syrups).

3.2.3. Cough, Cold and Fever

[1] not always the branded product, used more generically for any balm

The findings indicated that mother start to take note and get worried when the cough does not go away and the child suffers from fever as well. It is at this moment that the mothers consult medical or drug store-based practitioners. For example, Brahmin and Chhetri mothers in Chitwan mentioned that, "**we rush the child to the medical practitioners, if the child has cold, cough and fever."** Giving boiled water, warm foods and keeping the child warm in particular the chest area came up as some of the measures taken at home for cough, cold and fever. Almost all mothers mentioned that they consulted the local traditional healers first, to ward off evil spirits and appease angry deities. Some of the symptoms of cough, cold and fever as described by the mothers were **restlessness**; **child becoming irritated**, **loss of appetite, sleeplessness** and **mild breathing problem** because of blocked nose and cough.

3.2.4. Pneumonia

Respondent mothers of all ethnic groups were very familiar with the term pneumonia. Pneumonia is understood as the **combination of cough, cold, fever and fast breathing/difficult breathing**. It was considered severe by all respondent mothers. A vast majority of the mothers mentioned that their children had pneumonia at least once.

They said that the pneumonia was one of the major health problems in their community. Difficulty in **breathing**, **unable to sleep**, **too sleepy**, **noisy breathing**, **unable to drink or suckle mother's milk, restlessness** and **irritated behavior** were some of the symptoms pointed out by the mothers.

Brahmin and Chhetri mothers believed that only good medical practitioners and strong medicine could provide quick relief and cure pneumonia. The mothers also mentioned that since they sought the help of medical practitioners at early stage, they are likely to spend less money on the treatment. On the contrary, Musahar mothers visited medical practitioners when the case became too serious and they often ended up paying more for the treatment. It was found that some of the Musahar mother had spent as much as Rs. 5,000 for treatment of their children.

All mothers took pride in saying that although their children suffered frequently from cold, cough and fever and sometime pneumonia none have died of pneumonia. Mothers were aware of the fact that cough and cold if not cared properly may develop into pneumonia.

Box 1. Terms and Expression to Describe Pneumonia and Danger Symptoms

Brahmin/Chhetri

- *Swah swah garne/Chhito Chhito swash ferne* (fast breathing)
- *Ghyar ghyar garne* (Noisy breathing)
- *Saas pherna garo* (difficulty in breathing)
- *Kokha Hanne* (chest in-drawing)
- *Dum phulne* (swollen breathing)
- *Chhat pataune* (Restlessness),
- *Salang Sulung Hune* (Weakness/Convulsion)
- *Sarir/nidhar tato hune* (increased body temperature)
- *Nasutne* (Unable to sleep)/ Sutirahane (too Sleepy)
- *Khana kam khane* (loss of appetite)
- *Dudh nakahane* (don't feel like suckling)

Tamang

- *Kokha hanne* (Chest in-drawing)
- *Ghyar ghyar garne* (Noisy breathing)
- *Na nabha khaji* (unable to cough out mucous)
- *Ghanti sar sar lazi* (noisy breathing)
- *Na khaji*, (mucous flow), *Nodpa* (Cough), *Jar khaji* (fever)
- *Aankhami* (unable to eat)
- *Po boba* (swollen stomach)
- *Simbatu khaji* (cold sweat)
- *Nepale/Mastira Lagyo* (pneumonia),
- *Dudha Khana Nasakne* (Unable to Swallow)

Tharu

- *Jar aune* (fever),
- *Khokee lagne* (Cough),
- *Swah Swah garne* (Difficult breathing)
- *Aaama ko dudh khana nasakne* (unable to suckle)
- *Kokha dumaiche* (Chest pain)
- *Dulki Jar* (Shivering fever),
- *Ghanti Ghar Ghar Karchhe* (Noisy breathing)
- *Dublaidai jane* (Weight loss),
- *Dhekarwa* (Convulsions)
- *Rune* (cry incessantly)

Musahar

- *Aankha munne* (Stare for a long time)
- *Naak sur sur karche* (breathing problem)
- *Ghanti ghar ghar karche* (Noisy breathing)
- *Neta ayeche* (Unable to Cough out, mucous)
- *Dudh nakhayeche* (unable to suckle)
- *Cup bhaelache*(Cough)
- *Thandi lagaiche* (Cold)
- *Ulti aune* (Vomiting)
- *Paanj mariche* (Chest in drawing)
- *Chatpat garne* (restlessness),
- *Bachha roiche* (Cry all the time)
- *Bhundi Tala Mathi Jane* (Strong movement of Stomach)
- *Pajra khapche* (Chest in-drawing)
- *Lamo lamo sans pherne* (Difficulty in breathing)

Muslim

- *Jukam, Thandi, Bhukar* (cough, Cold, Fever)
- *Naak sur sur karche* (breathing problem)
- *Pajra Marche/Khapche* (chest in drawing)
- *Bachha roiche* (cry all the time)
- *Ma ke dudh nakhaiche* (unable to suckle)
- *UltiaAune* (Vomiting),
- *Bhukh Nai Lagichhe* (No appetite)

Most of the mothers narrating past ARI episodes believed that poor diet, continued diarrhea, cough and fever for long time, weakness and excessive use of cold water as some of the causes of danger signs. Majority of respondent mother said that they had sought immediate medical help when child developed one or two danger sign i.e. difficult breathing, high fever, loss of appetite or restlessness and so on.

Common practice was to wait for a couple of days before seeking health practitioner's help. If the symptoms did not go away or child's condition did not improve then they sought medical help. It was noted that the mothers even changed the care providers, visit either famous local medical practitioners or hospitals/private clinics/nursing homes. Over half of the mothers reported to have done so.

3.3. Care seeking practices

An emerging pattern on care seeking practices was noted. Sequence of care seeking in order of priority included home remedy, help from traditional healers, self-medication, visit private practitioners and government health facilities. It was almost a personal habit for most of the mothers to visit traditional healers. Since they believed that the evil sprit and/or angry deities/ "kul devta" also caused illness and no treatment will have effect until they are appeased. It was believed that only the traditional healers could ward off evil spirits and appease angry deities. Hence the

mothers combined both traditional healing and medical care. Hospitals were considered as last resort for the treatment.

It was noted that among most of the mothers belonging to Tamang, Musahar and Muslim communities, even case of visible danger signs usually did not warrant immediate help-seeking actions. In many case financial constraints were provided as the main reason for such a behavior.

"When my child suffered from pneumonia, I first approached the traditional healer and practiced some home remedy.

When this didn't work, I took her to the medical shop nearby. The child's health did not improve but rather deteriorated by the medicine given by the retailer. Finally I had to rush to the private clinic."

- Mother of child with past ARI episode, Kumroj, Chitwan

In general Muslims and Musahar mothers were found to be more at ease and unconcerned about the need to care for their children, in terms of hygiene, sanitation, feeding, clothing and so on. In sharp contrast to such behavior economically well off and educated mothers belonging to Brahmin/Chhetri, Tharu and Tamang community were seen to follow trend of approaching health care providers immediately upon noticing the danger signs. Further, it was seen that such groups were very particular about feeding their children on time, keeping them clean and ensuring proper clothing.

The interviews with mothers with sick child less than 6 months of age revealed that the babies were suffering from various illnesses like loose motion, cough and cold and pneumonia. Majority of them turned towards the traditional healers ("*fuk fak*") or applied some sort of home remedy (massage with specially seasoned mustard oil, kept baby indoor and warm).

Only 6 out of 30 mothers interviewed, having a sick child during the time of interview, had sought medical help in response to prolonged severe cough and fever. The reason for seeking the medical help was that they felt that ***"It is not wise to take risk in case of babies"***. Others had used home remedies only, since they felt that the problem was not serious. The children in context were suffering from loose motion and mild cough.

According to the mother it was quite common for the children to have mild diarrhea. Some mothers did mention that if other symptoms like difficult breathing or fever or loss of appetites appear, they would seek an immediate medical help. However, it was mentioned that all of them were avoiding oily, sour and spicy food or they were breast feeding the child more frequently.

3.3.1. Home remedy

It was observed that there was a general trend of people not visiting the health facilities or health workers for care-seeking unless the problem was serious. They preferred to call on the traditional healers first and any problems, which were considered minor, were first treated at home.

Most of the mothers believed that common cough and cold could be cured with home remedy. Home remedies involving use of herbal drink, massage and keeping child warm (Chest) was found to be very common.

Some of the home remedies most commonly practiced common for cough, cold, fever and blocked/running nose are listed below:

- Massage child with warm mustard oil as well as the mothers, in case of the breast feeding mothers;
- Light massage on chest with special mix, prepared with cow ghee and camphor;
- Frequently providing boiled water;
- Application of warm mustard oil seasoned with *jeera/ marich* (cumin/pepper) on the scalp and forehead;
- Administration of hot drink prepared with turmeric powder (*haldi paani*);
- Application of crushed garlic on scalp and forehead;
- Application of *matti tel* (kerosene) on the forehead of the child;
- Keep child away from dust and smoke;
- Keep child warm with extra clothes and blankets;
- Body massage with warm mustard oil seasoned with *methi* and garlic;
- Clean nose frequently;
- Give ginger water (boiling water with ginger) ;
- Application of *rudilo* (coral jasmine) on the body;
- Give *rudilo* water;
- Give warm milk with pure *ghee* (Cow) to drink.

3.3.2. Traditional healers

If the health of the child does not improve with home remedy, the next step invariably for mother was to visit traditional healers. Several mothers reported to consulting traditional healers even before or while practicing home based remedy or care.

The **Guruwa** denoted the traditional healer of Tharus, the **Bhombo** of Tamangs, the **Ojha** of Musahars, the **Maulvi / Mulla** of Muslims and **Dhaami/Jhaankri** of Brahmin/Chhetri.

The traditional healers, based on their own world view practiced "*Fuk-Fak"* (use of mantras) to ward off evil spirits and to appease deities. As a protection against evil spirits, practice of giving "*Jantar"* (amulets) was very much prevalent in the Tharu community. The Tharu child is given to wear a *jantar* specially prepared by Guruwa when he/ she suffered from "*dulki jar*" (shivering fever).

Respondent mothers, irrespective of caste/ethnicity, educational and economic background ritually consulted the traditional healers. They also believed that until the evil spirits were warded-off or appeased, medicines will have no effect on the sick child.

3.3.3. Self medication

Most of the mothers who had sick child mentioned that they applied *"Vicks"*[2] to soothe the throat and chest to ease breathing; Paracetamol to control fever and headache; cough syrup for cough (observation).

These medicines were easily available in the local drug stores and general stores. Most of the mothers were found to combine self-medication with a home remedy. It was also observed that mothers kept a set of medicines either bought from the drug store or left over at home (see Box 2).

[2] not always the branded product, used more generically for any balm

Box 2. List of the medicines - Self prescribed/ bought and left over medicine kept at homes.

Antibiotics	**Cough syrups**
• Amoxicillin • Ampicillin • Sporidex • Tetracyclin • Cotrimoxazole	• Niko • Tuspel • Honeytus
Vitamin	**Medicine for fever**
• Aristozyme • Vitamin B Complex	• Cetamol • Brumol • Other brands of Paracetamol

3.3.4. Drug Store

Presence of an accessible drug store was found in case of each community that was included in the study. Most of the drug stores were run by the people who had only few days training to obtain license for running the drug store.

Drug stores were considered a more friendly option, since they could relate easily as they are familiar with local terms and expressions and spent more time with mothers discussing about the problems. They even provided service and sold medicines on credit. Most of the drug retailers also mentioned that the local people rely more on them than the government health facilities. It was observed that antibiotics such as Amoxicillin, Ampicillin, Sporidex were frequently dispensed to the clients, which almost always provided immediate relief to the child. In a usual scenario,

only when those antibiotics did not work, the drug retailers would advise mothers to consult private doctors at the district hospitals or private clinics.

3.3.5. Health Facilities

"…most of the people visit private clinics or medical shops. Very few of them visit government health facilities."

- Private practitioner at Bachaulli, Chitwan

Mothers had the doubts regarding the quality of care at the government run health facilities. Even in cases where mothers lived nearby government health facilities, they did not prefer to visit these facilities for care-seeking. There were cases of some health workers admitting that very few people visit the government health facilities.

Some of the reasons mentioned for not visiting health posts as provided by the participants:

- Government health facilities are open (or the health workers are available) only at the limited time during the day (10-2 pm).
- does not open in public holidays
- Frequent absence of senior health workers
- Unavailability of "appropriate" medicines
- Health workers run their own clinics and spend more time at clinic than provide service at government health facilities

It can be seen that most of the reasons given were related to inconvenience of people visiting the health facilities or the service not being available at times when it is convenient for the people.

3.3.6. Female Community Health Volunteers (FCHVs)

All the interviewed FCHVs had received training on ARI along with trainings on family planning, polio, diaherreal diseases, health and sanitation etc. They also mentioned that they receive refresher training on ARI once a year. They were found to be generally popular. Some mothers also acknowledged them for their service by addressing them as *'dactarni didi'* because of their participation on different preventive and curative health care activities and being from the same community. This clearly shows the general acceptance of FCHVs in their respective community.

FGDs and personal interviews with the mothers revealed that not all of the respondent mothers were aware of FCHVs role in ARI treatment; a few were even ignorant of their presence in the community.

Some mothers felt that FCHVs lacked or did not usually have effective medicines and proper training. It was mentioned that only giving "*Goti or Gotia"* and advice was not enough. However, those mothers who were found to approach FCHVs for care-seeking and advices seemed quite satisfied with the service provided.

"…..since the FCHV is not well trained and is not that literate, we don't trust her."

- Group of young educated and economically well off mothers, Kumroj VDC, Chitwan

FCHVs with little or no formal education were less popular among young mothers, especially from the educated and well off families. However, fairly senior FCHVs belonging to their own caste/ ethnic group was found to be more acceptable and generally trusted by the mothers.

The study team also checked the record of the FCHVs - ARI book, Iron supplementation and Vitamin A. It was found that most of the FCHVs had their records very well maintained. Selected FCHVs' record showed a significant number of ARI cases that were treated and cured successfully.

3.3.7. Private Clinics

In a relative term, even though the private clinics were more costly, most of the mothers preferred to visit the private clinics rather than the government health facilities. The preference as mentioned was because these private clinic services were always available (day or night), easily approachable and mothers believed that treatment was more effective. Mushrooming of private clinics and better network of roads with transportation facility also made them more accessible.

Most of the communities had one or two very popular and accessible practitioners. They were much preferred by the mothers as against government health facilities or even the medical doctors.

3.3.8. Hospitals

Compared to the private clinics, Hospitals were not much preferred, because of the distance and inconvenient service hours. Hence, it was visited only when the situation of the sick children worsened and/ or when the referrals were made by the government health facilities and local private practitioners. The hospitals were viewed as the last resort for care seeking behavior.

3.4. Special food items avoided or taken

"…. Since we are poor we can't make choices. Rich people do take extra foods which are nutritious such as meat, fish, beans and pulses."

- Musahar mothers, Lakhantare, Morang

The existence of belief that certain food items were harmful for breast-feeding mothers with sick babies was found among all ethnic groups. Food restrictions included hot, sour, oily and bitter food items.

Frequently cited harmful food were bitter gourd, *khesari ko dal* and pumpkin (see Box 3). Almost all the respondent mothers abided by the food beliefs when their babies suffered from ARI. However, few participants particularly belonging to Musahar community mentioned they couldn't afford to abide by such food beliefs as they cannot buy alternative food. They have to eat whatever is available.

Box 3. Some of the food items avoided or taken by breast feeding mothers

Food and fluids avoided	Special food taken
• Cold foods (in terms of temperature) • Sour and spicy foods • Oily foods • *Kalo Dal* • *Bhindi* (Lady Finger) • Cold water • *Khesari ko Dal* • *Kubhindo* • *Lauka* • *Gahat*	• *Dal Bhaat* • Warm Water • *Masoori ko Dal* • Roasted potatoes • Fish • *Tulsi* leaves with warm water • Warm water boiled with ginger/ pepper/ turmeric Powder • Meat (local chicken) • Tea prepared with *Marich* (pepper)

There was a common understanding among all the groups that mothers should avoid liquor, smoke or chew tobacco especially when the children were sick. A sick child is also refrained from hot, sour, oily and spicy food including cold food items, pumpkins etc.

3.5. Practice of Administration of medicines as per providers' prescription/ instruction

"Due to the financial reasons and constraints, people here do not buy the complete dose of medicines. Further, they stop giving medicines to their child if s/he starts to play and eat."

- Drug retailer at Bachaulli VDC

Mothers usually followed the instruction of providers regarding the medicines, especially antibiotics. But rarely did they comply fully with the instructions, often stopped giving medicines once the health of the child improved visibly. The mothers mentioned that they usually stopped giving antibiotic once the child begins to eat or play normally. Such practices often resulted in a stock of unused medicines at homes. The leftover medicines were reused if the child suffers from similar illness.

In addition, it was revealed from focus group discussions that some of the mothers do not even buy the complete doses as prescribed.

3.6. Preventive Measures

It was found that mothers were familiar with the concept of preventive care and they had a set of prescribed tradition or behavior to prevent illness among the children and family members. The research team found two types of preventive measures practicing in all caste/ethnic groups. Firstly, Mothers took special care in terms of performing *puja* once a year to prevent illness among the children. These *pujas* were done both at the household and community levels for the welfare, sound health and prosperity of all the people, cattle and farm/ production in the community. Secondly, they also reported that they took special care of children by avoiding or giving special foods and fluids, oil massaging, avoiding dusty and smoky environment.

It was found that preventive measures were somewhat less practiced among Tamangs, Musahars and Muslims communities.

Box 4. Most Common Preventive Measures taken by the mothers

- Worshipping gods and goddesses
- *Bhakal garne* (promises made to deities to ward-off diseases)
- Protect form cold
- Regular oil massage
- Apply *gajal* (mascara) to ward off evil spirits
- Gram puja (worship to village deity to keep children healthy)

3.7. Comparative Findings (1994 AND 2005): CONTINUITY AND CHANGE

CONTINUITY

Findings from 1994 study	Findings from 2005 Study
• The belief that easterly winds, evil sprits, and angry deities were causes of severe respiratory illness was prevalent in all groups.	• Belief that evil sprits, angry deities and clan god may cause illness to children including ARI was still strong and prevalent.
• Pneumonia was considered very serious by all respondent mothers. Mothers believed that only doctors could cure pneumonia by giving strong medicine.	• Pneumonia was perceived to be very serious by all study population. They sought immediate medical help.
• Dietary and fluid restriction was observed by most mothers, nursing mothers in particular.	• There was no change in mothers' dietary and fluid restriction. Most breast feeding mothers strictly adhered to food beliefs and avoided hot, sour and oily foods.
• Mothers do not complete the course of the antibiotics prescribed.	• Mothers usually followed the instruction of providers regarding the medicines, including antibiotics. However, most of them stopped giving antibiotics once the child began to eat, feel better and play normally.
• For the most mothers, especially Tamang and Muslim, the first medical contact outside the home was with the nearest drug retailer.	• Drug stores continued to be most preferred option as they are more willing to listen and discuss problems. In addition, they availed medicine on credit.
• Private clinics were preferred because of convenience, familiarity, and positive experience in the past.	• Private clinics were second most preferred choice as they were always there, easily approachable and mothers believed that treatment was more effective.

• Very few mother sought help from local government health facilities because of the distance from home or village, lack of medicine, and inconvenient opening hours.	• Health Posts and Sub-Health Posts were yet to become first choice for seeking treatment with most mothers. Limited opening hours, frequent absence of senior health workers, and unavailability of appropriate medicines were learnt to be some of major reasons for this.
• Self-medication was commonly practiced by mothers of all ethnic groups.	• Self-medication continued to be popular and commonly practiced by mothers of all ethnic groups.

CHANGE

• Lack of awareness that coughs and colds can develop into pneumonia.	• Distinct positive change noticed was that all the mothers (study group) were aware that cough and colds could develop into pneumonia. ARI focused program has created awareness at large.
• Precious time was found to be wasted on appeasing deities and warding off evil spirits.	• Mothers did not delay in seeking health care for illnesses considered serious i.e. pneumonia despite their adherence to traditional beliefs and rituals of appeasing angry deities and evil spirits.
• The first contact sought is with traditional healers. This contact was found as most important for Tamangs, less so far Tharu and Muslims, and least for Brahmin and Chhetris. Most of the mothers who do seek professional medical help did so only after this contact.	• Traditional healers continued to play role in the study area. The mothers did not, however, rely entirely on traditional healers. They sought their help simultaneously with other health care providers.
• Tamang, Tharu and Muslim mothers do not visit private doctors/ clinics and hospitals frequently.	• Tamang, Tharu and Musim mothers have begun to seek prompt care either from private clinics or government health facilities.
• The role of female community health volunteer does not appear to be important in the care of child with ARI.	• FCHVs were generally found to be effective in advising mothers on essential care practices as well as management of simple ARI problems. Mothers who approached FCHVs appreciated their service. All the same, in some communities mothers were found to be not aware of FCHVs.

3.8. Treatment Seeking Behavior (Sick children under six months)

A total of 30 interviews with mothers with sick child less than six months of age revealed that the babies were suffering from various illnesses like cold, cough, mild fever, loose motion, diarrhea, pneumonia and skin diseases.

It was found that mothers considered cold, cough and loose motion as common illnesses and hence were not considered enough to warrant an immediate medical attention. However, it was reported that they took special care of babies at the household level. Care at the household level for cold (*rugha*) was mentioned as,

- Massage babies with warm mustard oil;
- Keep child indoor and warm;
- Light massage on chest with cow ghee and camphor;
- Keep child warm with extra clothes;

Avoiding or taking special food and fluids by breastfeeding mothers were also mentioned by mothers of all ethnic groups, for example;

- Avoid cold, sour and spicy foods;
- Avoid to drink cold water, and drink warm water boiled with ginger/turmeric powder/ *marich* (pepper)/ Tulsi leaves; and
- Avoid eating green vegetables and eat roasted potatoes, lentil curry.

Almost all the mothers had an attitude that the quality of food taken by breastfeeding mothers directly affects the health situation of infant. For example, *"If you eat cold foods like banana, Kalo dal, Lady finger, kubhindo, and green leafy vegetables during the winter season, your child suffers from cold and cough. This happens because cold goes through mothers' milk",* was a common understanding of avoiding and /or eating special kinds of food for breastfeeding mothers.

Wait and see attitude was more prevalent among the Tamang and

Musahar ethnic groups, feeling that the problem was not serious. Brahmin and Chhetri mothers were found to be more serious and sought immediate medical help from medical practitioners. The reason for seeking the medical help felt by mothers was that *"it is not wise to take risk in case of babies".*

For most respondent mothers, the first medical contact outside the home was the nearest medical shop because of the convenience, familiarity, positive experience in the past. Unlike other mothers, six of them having babies with cough and fever did not seek immediate help rather they waited for 2-3 days for medical help.

Mothers had selective impression towards private practitioners based on the nature of the health problem of the children and attitude towards the practitioners. Some practitioners were very famous to treat child related diseases.

Young, educated and economically better families from Brahmin and Chhetri communities had consulted private practitioners or visited health facilities immediately compared to uneducated and economically poor families from Tamang, Musahar, Muslim and Tharu families.

It was found that mothers from all communities were found to be more serious about the health problems of children below six months and sought prompt care from qualified health care providers they considered best. *“We cannot take chances with babies’ health.”*

CHAPTER IV: EXPLANATORY MODELS

People categorize the diseases and seek different healers based on their own world view. The case of ARI is not exceptional. Based on their beliefs and practices, the research team found the following model to explain and categorize the illness, degree of severity and management practices of different caste/ethnic groups.

4.1. Explanatory Model for Musahars

Disease	Local Terms	Severity	Symptoms	Causes	Treatment
Cold	• *Thandi lagaiche* • *Thandi pakadche* • *Neta ayeche* • *Naak sur sur karche*	Mild	• Unable to hold back the mucous	• Using cold water by the mother for a long period of time • Unhealthy surroundings • If cough/cold deteriorates • Fever for a long time	• Home remedy • Self-medication • Traditional healers
Cold and cough	• *Cup kalla* • *Cup bhaelche* • *Khokee lagailche* • *Khokee hoilche*	Serious than cold	• Unable to hold back the mucous • Cough	• Eating excessive *Khatta* (sour) foods • Staying without clothes in winter • Using cold water for a long time (mothers)	• Home remedy • Self-medication
Cold, cough and fever	• *Aankha munne* • *Naak sur sur karche* • *Neta ayeche*	Intermediate	• *Bachha roiche* (Cry abnormally) • Restlessness	• Cough/cold for a long time	• Home remedy • FCHVs/traditional healers • Drug stores • Visiting traditional healer (*Ojha*).

Continued……..

Disease	**Local Terms**	**Severity**	***Symptoms***	**Causes**	**Treatment**
Pneumonia	• Pneumonia	Severe	• *Swah swah karche* (difficult breathing) • *Aaankha munne* (stare for a long time) • *Nasutne* (unable to fall asleep) • *Naak sur sur karche* (breathing problem) • *Ghaanti ghyar ghyar karche* (noisy breathing) • *Dudh nakhyaeche* (unable to drink mother's milk • *Paanj mariachi* (chest in-drawing) • *Chatpat karche* (restlessness) • *Pajra khapche* (chest in-drawing) • *Kokha hanne* (swollen breathing) • *Bhoodi tala maathi jane* (strong movement of stomach) • *Lamo lamo saans pherne* (difficult breathing • *Kokha dumaiche* (chest in-drawing)	• Fever for a long time • Diarrhea	• Private practitioners • Locally available government health facilities • Hospitals

4.2. Explanatory Model for Tharus

Disease	Local Terms	Severity	Symptoms	Causes	Treatment
Cold	• *Marki* • *Rugha* • *Thandi*	Mild	• Unable to hold back the mucous • *naak bata singan aune*	• *Thandi* (cold) • Stay without clothes • Using cold water for a long time (mother/child) • Eating excessive 'cold' foods during winter (*dahi*-curd/ *kela*-banana)	• Home remedy • Traditional healers
Cold and cough	• *Rugha - khokee*	Serious than cold	• *Khokee lagne* (cough) • *Naak bata sigan aune* Mucous flow) • *Taloo dhasne* • *Rune* (cry abnormally) • *Nasutne* (unable to fall asleep)	• Using cold water for a long time • Stay without clothes • *Thandi*	• Home remedy • Drug retailers (few cases) • Traditional healers
Cold, cough and fever	• *Rugha – khokee Jar*	Intermediate	• *Aaakha ramri naherne* (unable to see properly)	• *Jar* (fever)	• Home remedy • Private practitioners • Locally available government health facilities
Pneumonia	• *Pneumonia* • *Dhekarwa*	Severe	• *Ghyar ghyar hune* (noisy breathing) • *Kokha Hanne* (swollen breathing • *Saas chito chito pherne* (fast breathing) • *Ghaanti sir sir garne* (breathing problem) • *Chaati khapne* (chest in-drawing) • *Pajra khapne* (chest in-drawing)	• *Jar bigrera* (if the fever deteriorates)	• Private practitioner • Locally available government health facilities • Hospitals

			• *Taloo Dhasne* • *Kokha hanne* (chest in-drawing)		

4.3. Explanatory Model for Tamangs

Disease	Local Terms	Severity	Symptoms	Causes	Treatment
Cold	• Rugha	Mild	• Singan aune (unable to hold back the mucous) • Nanaba khaji (Mucous) • Nap khaji (singan aune)	• Chiso • Thandi	• Home remedy • Self medication ("*vicks*") • Traditional healers
Cold and cough	• Rugha-Khokee • Bhingbaro (khokeelagne)	Serious than cold	• Singan aune, khokee lagne	• Cold for a long time • Weakness	• Home remedy • Drug retailers • Self medication (vicks)
Cold, cough and fever	• Rugha/khokee jaro • Chhwa khaji (fever)	Intermediate	• Jara khajee (increased body temperature) • Aankhami (unable to eat)	• Malnutrition	• Bhombo (traditional healers) • FCHV (few cases) • Private practitioners • Locally available government health facilities (very few) • Bhakal garne (thamba)
Pneumonia	• Pneumonia • Nepale Lagyo • Mashtira lagyo	Severe	• Ghanti sar sar laji (nosiy breathing) • Ghyar ghyar laji (noisy breathing) • Chyabagi chyaba laji • Po boba (swollen stomach) • Cherne (loose motion) • Saas pherna garo (breathing difficulty) • Kan harauni (unable to eat) • Simbatu khaji (cold sweat) • Syha syha taji (noisy breathing)	• Jaro bigrera (if the fever deteriorates) • Rugha, Khokee bigrera (if cough and cold persist) • Weakness • Cold weather	• Bhaakal garne-thamba (promises made to gods and goddesses) • Private practitioners • Hospitals

4.4. Explanatory Model for Brahmin/Chhetris

Disease	Local Terms	Severity	Symptoms	Causes	Treatment
Cold	• Rugha • Thandi • chiso	Mild	• Singan aune (mucous flow)	• Cold (weather) • Using excessive cold water • Unhealthy surroundings • Stay without clothes for long time • Eating 'cold' food	• Home remedy
Cold and cough	• Rugha-Khokee	Mild	• Khokee (cough) • Singan aune (mucous flow)	• Cold (rugha) for a long time • Eating sweet foods • Eating cold foods • Smoke/dust	• Home remedy • Drug retailers
Cold, cough and fever	• Rugha- khoklee-Jaro	Intermediate	• Sarir/nidhar tato (increased body temperature) • Bachha rune (cry abnormally) • Nasutne (unable to sleep) • Chatpat garne (restlessness) • Khana kam khane (loss of appetite) • Unable to drink mother's milk • Nari chito chito chalne (fast pulse rating)	• Cold and cough for a long time • Weakness • Change in weather • Daant auna lagya bela ma (when the teeth starts growing)	• Private practitioners • Home remedy • Hospitals • Locally government health facilities (very few of them visit)

Continued……..

Disease	Local Terms	Severity	Symptoms	Causes	Treatment
Pneumonia	• Pneumonia	Severe	• Chhati ghyar ghyar garne (noisy breathing) • Saas chito chito pherne(noisy breathing) • Aankha naherne • Rune • Chatpataune(restlessness) • Daant kit kit garne(chew teeth) • Khana nakhane(loss of appetite) • Dudh nakahne (unable to drink milk) • Kokha hanne (chest in-drawing)	• Cough and cold for a long time • Fever for a long time • Cold weather • Weakness • Weight loss	• Medical practitioners • Hospitals

4.5. Explanatory Model for Muslims

Disease	Local Terms	Severity	Symptoms	Causes	Treatment
Cold	• Thandi • Sardi	Mild	• Running nose • Watery eyes	• Change in weather • Long exposure to cold • Eating cold food like ice cream, banana,	• Home remedy • Rub *"vicks"* • Consult mullah (traditional healer)
Cold and cough	• Thandi • Jukam	Mild	• Running nose and cough • Sometimes non stop cough for long time • Vomiting	• Eating cold food • Bath in cold water • Playing without cloths • Playing in a dusty environment	• Home remedy • apply *"vicks"* • Buy cough syrup from the medical shop
Cold, cough and fever	• Thandi • Jukham • Bhukhar	Intermediate	• unable to eat and drink properly • Fever • Weakness • Crying • Sleepy • Body temperature sometimes very hot and sometimes very cold	• Prolonged cough and cold • Change in weather • No improvement in fever	• Increase the frequency of home remedy • Consult medical practitioners (local level) • Give cetamol or paracetamol • Cough syrup
Pneumonia	• Pneumonia	Severe	• Bukhar (fever) • Pajra mariche (chest in drawing) • Ghyar ghyar karche (noisy breathing)	• Prolonged cold and cough • Weakness	• Visit at the nursing homes, hospital or private clinic •

CHAPTER V: CONCLUSIONS

ARI, in particular Upper Respiratory Infection (URI) was a common health problem in all study areas. The term 'pneumonia' was found to be very popular among all the study population.

The findings revealed increased awareness and understanding among the mothers of study group on ARI illnesses, including pneumonia, and its signs and symptoms and severity of illness. Each caste/ ethnic group had their own terms and expressions for such illnesses.

Common cough, cold and mild fever, are treated with home remedies that included several impressive variety of hot drinks and oil massage prepared/seasoned with various herbs.

In case of pneumonia as compared to earlier finding (1994), as soon as children developed two or three danger signs, all mothers sought immediate help from medical practitioners simultaneously along with ritualistic treatment from the traditional healers. Musahar mothers reported to have waited for a day or two before seeking medical help. Mothers become more concerned in case infants and babies. They sought immediate medical help as one or two pneumonia symptoms appeared. They not only sought immediate help from care providers but also strictly observed food regimen.

Findings also indicated a definite change from that of earlier study (1994) regarding the belief and use of traditional healers. Although traditional healers were the first ones to be consulted none of the mothers entirely relied on them alone. Traditional healing was practiced simultaneously with other medication.

It was found that there existed multiple options open for mothers to seek care and treatment during illnesses. Mushrooming of drug store manned by often young and fresh health workers i.e. ANM, VHW, and AHW with little or no experience on health care, in particular pneumonia. Yet they are the most easily accessible and preferred facilities. Because of easy access and long opening hours, they were the most sought after care providers by the mothers. Use of strong medicine which provided immediate relief or visible improvement in the sick child, along with free service and ability to relate with mothers in their own language and sympathetic hearing to mothers' problem/ narration were other reasons for their growing acceptance and popularity.

Government health facilities were not the first choice with most mothers who could afford to pay to go to private clinics. Health care providers' frequent absence and irregular/ limited service time and "standard" medicine for ARI kept people away from using the health facilities' services.

FCHVs record revealed a good recovery percentage and mothers who sought their help expressed satisfaction over their services. Most of the mothers were aware regarding the role of FCHVs as they distribute iron capsules, contraceptives, Vitamin-A and administer polio drops. However, some of the mothers were found to be ignorant of FCHVs' presence in the community and/or their role on ARI treatment/management. It was also found that educated and economically well off mothers had low opinion towards FCHVs ARI management. It was noticed that the mothers from the same caste/ethnic background as FCHVs were found to visit FCHVs for frequent consultation.

Self medication, specially, for common illness including minor ARI cases was very prevalent among mothers. Easy availability of medicines; and common practice of using left over or "stocked" medicine for similar health problems were indicated as the major reasons for such a behavior. Medical help was sought only when self medication failed to improve or worsened the health condition.

This study clearly shows degree of variation on care seeking practices among different caste/ethnic groups. It was also found that the care seeking practices differed within the same caste/ethnic groups. There are certain factors that facilitated or hindered seeking care from medical practitioners and health care providers;

- Awareness and knowledge level of mothers on danger signs impact the lag time between child developing and illness and seeking health care from health practitioners. Lesser the knowledge, longer was the time lag.
- Education status of the mothers was an important factor in determining how prompt the mothers seek health care from the health care providers. Though not universally true, more educated mothers (combined with awareness on danger signs) were seen to be more prompt on consulting and visiting health care providers, than illiterate one.
- Economic condition of the family also was found to be a major factor that affected the care seeking behavior. Financial constraints normally prevented families (mothers) from seeking immediate care from health

care providers. Usual practice was to wait for home therapy to cure the illness.

- Distance and accessibility to health care providers was an important factor in determining timing of seeking care and the choice of health care providers. Health providers in near vicinity usually meant the consultation was much more immediate, however it was also seen that the limited working hours of public health facilities worked as disincentive for mothers to seek care from them.
- The belief and trust on traditional healers and practices (including home therapies) also was found to be a crucial factor in care seeking behaviors of the mothers. The more “perceived” knowledge and trust on traditional home therapies (not always helpful) meant greater time lag in seeking care from health care providers.
- It was also observed that one of the most important factors was the age of the sick child. It was observed that lesser the age of the child more sensitive were the mothers in consulting and visiting health care providers.

It is expected that the results of this ethnographic study will be useful in developing the program for ARI control. This research provides program professionals with recommendations for appropriate communication with the mothers of young children, particularly in terms of household care for a child with a cough or respiratory difficulty. In addition, by identifying factors that facilitate or impede the immediate search for a trained caregiver for standard management of pneumonia or other ARI cases, this study might be useful in assisting the ARI program in gearing its efforts accordingly.

Unlike the prevalent belief, rural mothers understand the concept and take preventive measures to keep their children healthy. The results of this ethnographic study can be used in the formulation of general recommendations for household care and listed in some sort of publication which can educate mothers on control and management of children with cough or respiratory difficulty. In short, these recommendations can urge that children continue to be fed, that their intake of liquids be increased, throat pain assuaged, and cough relieved by using appropriate techniques, and that a trained care-provider be sought if the child presents accelerated or difficult breathing, if the child cannot ingest liquids, or if his or her general condition worsens rather than improves.

The most important sections have to deal with the local terms used to describe signs and symptoms of pneumonia, such as those appearing in this report. Furthermore, positive household remedies should be promoted and harmful practices be discouraged. Focus on general health, hygiene and community sanitation will help improving the health status of children beyond limiting to ARI related illnesses and care.

Apart from the adoption of recommendations for household care, the ethnographic study also points out to a number of recommendations concerning the improvement of ARI case management and control:

- The national ARI control program should give priority to training health workers and FCHVS who are willing to remain in the communities themselves. The mothers have less confidence in and consult less frequently with health service providers who work in their areas on strict schedule simply to fulfill the service obligations. The mothers prefer health workers or FCHVs with several years of experience who also speak the local language. The FCHVs with in-depth information and certain level of education have a greater potential to impact on the reduction of pneumonia-associated mortality.

  FCHVs services are very effective and appreciated by mothers where they know and understand the type of services being rendered. It is also crucial to inform mothers in their respective area about the role of FCHVs on ARI management. Thus, an on-going support program at the community level by the government health facilities is commendable. All the same increased efforts in terms of more frequent programs regarding ARI management and FVHVs role will greatly help FCHVs to enhance their effectiveness, credibility and acceptability in the community and various groups.

- Health workers and FCHVs should encourage mothers to seek out treatment from trained health worker at the first signs of severe diseases attributed to “supernatural causes”. However, since the mothers tend to first seek out the counsel of traditional healers, the ARI control program should explore and expanding the possibility of teaching traditional healers to refer children with signs of pneumonia or other severe disease to area health services.

- Health workers and FCHVs should teach mothers and provide constant information and refreshing to look for signs of respiratory difficulty (accelerated breathing and retraction) to infer correctly when the children are severely sick. Using platforms available at the mothers groups as well as other community-based groups could be an option for this. More

frequent and repeated education for mothers on timely and appropriate management of ARI, in particular pneumonia and appropriate health care management will greatly increase the effectiveness of the program.

- General medical practitioners may not be qualified to deal with child related ARI problems. Hence, regular orientation program to all private medical practitioners may further strengthen ARI management program.
- Promotion of specially designed education program for mothers on ARI management including proper use of medicine especially antibiotics, its proper administration, harmful impact on use of left over medicines at community levels using various channels. Mothers groups can play a significant role in instilling awareness on under use or overuse of antibiotics.
- People were not able or felt encouraged to use government health facilities effectively because of short opening hours. Hence an effective mechanism to ensure presence of health care providers throughout the working days and working hours may be improve frequency of visit to these facilities. Regular monitoring may encourage government health facility staffs to be more responsive and accountable.
- The current practice of over and/or under use of antibiotics in the study community is the matter of concern. In order to find out the extent of such practices, a study may be carried out in a broader group. It is also important health care providers both at government and private levels are aware of such practices in order to make health education and counseling more effective based on local realties. Hence, it is recommended that
    - A study on uses and misuses of antibiotics
    - Especially designed program for health workers to understand on going practices and beliefs regarding health-seeking behaviors.

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ANNEX 1 – CHECKLISTS AND GUIDES

Checklist for Focus Group Discussion with mothers/caretakers of children under the age of 5 years

Recognition and interpretation of ARI signs and symptoms

1) What are the common health problems in your community?
2) What are the signs and symptoms of those health problems?
3) In your opinion what are the common child related health problems in your community?
4) What are signs and symptoms of those health problems?
5) Have your child ever suffered from breathing problem (coughing, running nose, nasal blockage, difficulty in drinking, and stopped feeding well, fever)?
6) What do you say for such problem? (term used in their local language)
7) How do you know that your child has breathing problem (local categories)?
8) How do you categorize this particular health problem? (mild, intermediate, severe)
9) What are the signs and symptoms of 'mild' ARI (local term)?
10) What are the signs and symptoms of 'intermediate' ARI (local term)?
11) What are the signs and symptoms of 'severe' ARI (local term)?

ARI household management practices

1) What do people usually do if their children suffer from ARI (local term)?
2) Have your child ever suffered from ARI (local term)?
3) Which category? (mild, intermediate, severe)
4) What did you do?
5) Did you manage ARI at home?
6) How did you manage ARI (local term) at home? (temperature management, providing especial food and fluids, avoidance of specific food, avoidance of smoke, use of local medicinal plants --herbs, barks, leaves and roots--, balm vicks, amulets, worshipping gods and goddesses, other rituals etc.)? and why?
7) Why did you manage ARI at home?
8) What did you do/use for mild category? (local term)
9) What did you do/use for intermediate category? (local term)
10) What did you do/use for severe category? (local term)
11) Did your child recover?
12) How did you know it?

Health-seeking behavior

1) If the child did not recover at home, where did you go? (traditional healers, medical practitioners, health facilities and private drug stores)
2) Why did you choose the particular health practitioners/healers?
3) Did you also visit traditional healers? (local term)
4) What did that person (local term) say about the disease (including examination process)?
5) What did he prescribe?
6) Did that person explain in detail regarding the care of the child (special food/fluids, medicines, etc.)
7) Did you follow that person's (local term) instruction?
8) Did your child recover? If not where did you go?
9) Did you visit health facilities/health practitioners? (FCHV, MCHW, VHW, medical stores)
10) Why did you visit the particular health facilities/practitioners?
11) What did that person say about the disease? (if yes/no why?)
12) What did that person prescribe?
13) Did s/he discuss about the child's problem, cause and treatment process (additional information- mother's perception health practitioners)?
14) Did you follow that instruction?
15) Do you know the medicines that have been prescribed?
16) Did you take full dose (local term) of medicines?
17) Why did you delay in taking the child to the health facilities?
18) How long did it take the child to recover?
19) How did you know that the child's health is improving?
20) Who decided to visit health facilities?
21) How did you visit (by foot, rickshaw, bus etc.)?
22) How much did it cost to reach health facilities?
23) What do you intend to do if your child is yet to recover?

Checklist for in-depth interview with mothers with experience of past ARI episodes

1) What made you decide that the child had ARI (explanatory model of understanding)?
2) What were the signs and symptoms of the disease? (local term)
3) What did you adopt for treatment?
4) Did you give any special food/fluids for the child during episodes?
5) In your opinion what are signs and symptoms of recovery?
6) What type of treatment did you provide at home? (special food/fluids, ointment, clothes, avoidance of smoke, medicinal plants-- leaves, bark, roots etc.)
7) Did you also visit traditional healers? (local term)
8) What did that person say?
9) What did that person prescribe/advise?
10) Did you follow that instruction (time factor visiting one healer to another)?
11) Did your child recover?
12) How long did it take?
13) If your child did not recover where did you go? (local term)
14) What did that person say?
15) What did that person prescribe?
16) Did you follow that instruction?
17) Did your child recover?
18) How long did it take?
19) Did you visit the health facilities/health practitioners?
20) Who decided to visit the health facilities? (probe further)
21) Who prompted to take decision to visit a health facility/practitioners?
22) How did you visit (by foot, rickshaw, bus etc.)
23) How much did it cost to reach health facilities?
24) What did the person say (medicine, time required to recover, signs and symptoms of improvement, etc.)?
25) Did you follow that person's instruction?
26) Did you take full dose of medicine?
27) What are the signs and symptoms of recovery?
28) How much did it cost to reach health facilities?
29) Do you have the report card? (observation)

30) Do you have remaining medicines? (observation)

Checklist for in-depth interview with mothers of sick children under the age of 6 months

1) What are the prevalent diseases (local term) in this community?
2) What are the signs and symptoms of those diseases?
3) What are the common child related health problems? (local term)
4) What are the signs and symptoms of those health problems?
5) What is your child suffering from? (disease)
6) In your opinion what are the causes of this disease?
7) For how many days your child is suffering from this disease? (local term)
8) What were the initial symptoms?
9) How did you know about it?
10) What did you do at home (including preventive measures- worshipping gods and goddesses, especial rituals, etc.)?
11) Did you approach traditional healers/TBAs/FCHV?
12) Who decided to go?
13) What did that person say?
14) What did that person prescribe?
15) Has the health of your child improved?
16) Did you also visit health facilities?
17) Whom did you visit?
18) What did that person (local term) say?
19) What did that person (local term) prescribe?
20) Is your child recovering?

19) Do you have the report card? (observation)

24) Do you have remaining medicines? (observation)
25) What do you intend to do now?

Note: Previous experience of the child health problems will be explored.

Checklist for interviews and interactive dialogue with health care providers

1) What are the common diseases in this community?
2) What are the major child related health problems in this community?
3) What are the local terms used for ARI in this community?
4) How do your recognize ARI? (type of ARI)
5) How do you categorize ARI (mild/intermediate/severe- local terms)?
6) How do people deal with ARI cases?

6.1) Do they practice home treatment (what do they do)?

6.2) Do they approach traditional healers/TBAs/ FCHVs?

7) What type of traditional healers are available in the community? (local terms)

7.1) How do they deal with ARI cases?

7.2) Do they prescribe allopathic medicines also?

7.3) Do they refer to medical practitioners if complications occur? (Kinds of complications)

8) In your opinion what are the causes for delaying in care seeking for ARI?
9) What do you recommend for early management of ARI?
10) Do people buy full dose of medicines?
11) Do they complete the course of antibiotics/medicines?
12) If not why don't they buy the complete dose of antibiotics?
13) What do you suggest to encourage the mothers to visit the health facility as soon as possible?
14) What preventive measures do you suggest (food, care and sanitation)?

Additional questions:

- What antibiotic do health practitioners prescribe for cough, ARI and pneumonia
- Find out whether timers are being used by health practitioners
- Indigenous practices for managing ARI and its trend (increasing/decreasing*)*

Examination process (for questioning and observation)

Traditional Health Care Providers

- Listen to complains/problems
- Observation of the sick child—feels pulse, temperature, breathing, chest/ stomach etc.

- Ask further questions to mother
- Advise, perform, prescribe: rituals, medicines, herbs, food/fluids, watch for symptoms—improvement or worsening—

Note: Health post facilities and gadgets; pharmacy/private practitioners' facilities and health gadgets.

ANNEX 2 - INFORMATION FOR RESEARCHERS

Four signs of ARI:

1. Fast breathing
2. Chest in-drawing
3. Stridor
4. Wheeze

Fast breathing:

If the child is:	Then he has the fast breathing if you count:
Age less than 2 months	60 breaths per minute or more
Age 2 months to 5 years	50 breaths per minute or more

Chest in-drawing: The child has chest in-drawing if the lower chest wall goes when the child breaths in. Chest in-drawing occurs when the effort required to breathe in is much greater than the normal.

Stridor: A harsh sound made when the child breathes in.

Wheeze: A child with wheezing makes a soft musical noise or shows a sign that breathing out is difficult.

A child who has: any danger sign is classified as having very severe disease.

Danger signs for the child of age 2 months up to 5 years are:

1) Not able to drink
2) Convulsions
3) Abnormally sleepy
4) Difficult to wake
5) Stridor when calm
6) Severe malnutrition

Signs:	○ Chest in-drawing (recurring wheezing)	• No Chest in-drawing • fast breathing (50 per minute or more if the child is 2 months up to 12 months; 40 per minute or more if the child is 12 months up to 5 months)	• No chest in-drawing • No fast breathing (less than 50 per minute if the child is 2 months to 12 months; less than 40 per minute if the child is 12 months to 5 years)
Classify as:	Severe pneumonia	• pneumonia	No pneumonia (cough or cold)

ANNEX 3 - ARI STUDY PROTOCOL

1. General question/queries to make participants feel comfortable

2. ARI specific questions:

    - Recognition and interpretation of ARI by type: cold, cough, breathing problem, ear problem, pneumonia etc.

    - Signs and symptoms of each ARI problem and categorization

    - Treatment pattern – each case; wait and see for some time/days: why; home remedy: when, by whom, what; administration of special food, liquids/ fluids; special care-- avoidance of smoke, dust, outing; performance of rituals; other sequence of care seeking : what when, why, whose decision

    - Reasons for going from one practitioners to another (one type of care to another)

3. ARI management practices based on earlier experience/advice

    - Type of problem

    - Nature of the problem

    - Narration of management practices adopted—what, when, why, whose decision; sequence of care seeking; food and fluids administered; rituals performed; home remedies

4. Preventive measures taken

5. Social, cultural, economic characteristics of participants i.e. caste/ethnicity, age of mothers, age at marriage, age at first delivery, educational level, source of livelihood ; major, minor , size and type of family; number of children (participants) etc.

Note: Above information will help in determining the emerging pattern if any on understanding of ARI episodes, nature of episode, care seeking practices and so on by caste/ethnicity, age, education, economic status, size and type of family, community/location

ARI study will seek

1. Detail information on ARI episodes

    - Recognition of signs and symptoms

    - Care and treatment sought (what, when, why, whose decision)

- Sequence of care seeking if more than one health care provider was consulted
- Rituals performed
- Special food/fluid administered
- Home remedy practiced (when, why and by whom)
- Special care- hygiene, sanitation, clothing, avoidance of dust, outing, contact with other children/outsider

2. Prevalence of ARI as perceived by mother (season, causes, age of the child)

3. Practices- preventive care if any (when, why, whom, what, how, by whom)

4. Mother perception on causes of ARI episodes- climatic/seasonal, mother's food habit, evil spirit, environment (dust, poor sanitation, negligence of mother, ignorance

5. ARI management practices

   - Household level: home remedy- what, when, by whom (herbal or allopathic)
   - Community level: neighbors, TBAs, traditional health practitioners, drug peddlers, FCHVs- what when, by whom
   - Health post, private practitioners, pharmacy- reasons for seeking consultation and help from above practitioners- why, at what point, whose decision, reasons for delay in seeking above care (Experience, expertise, examination process/practices of health care providers; tools equipment; type of medicine/remedy prescribed by type of ARI problem (interview and observation)

6. Accessibility (distance); presence of health care providers (health post, private clinic etc.)

7. Medicines kept at home, uses, administration of medicines prescribed by health care providers

ANNEX 4 - TOOLS AND TECHNIQUES

- Focus group Discussion sessions
- In-depth interviews (semi structured, open ended)
- Observations
- Participants observation
- Informal dialogue

1. Ensuring mother's and practitioners of ARI treatment procedures by using hypothetical scenarios

2. Moderator and note taker

3. Reviewing notes, elaboration on notes at the end of each day and preparation for the next day

4. Neutral/ non-suggestive questions will be framed. To maintain the interest of the participants interviews and discussion sessions will not go for more than 5 hours with a tea break in between (tea breaks will also be used for additional questions on related issues).

ANNEX 5 – SCENARIOS OF ARI EPISODES

CASE A: SIX MONTHS OLD WITH COUGH

Your neighbor, Mrs Thapa, has a baby girl, Sita, who is six months old. Two days ago the baby started to cough. She still has a cough and she also has a runny nose. She has a low fever. She takes the breast as usual, but she does not smile and play as much. Sita is Mrs. Thapa's first child, and this is the first time that she has been sick. Mrs. Thapa needs advise; what should she do?

CASE B: SIX MONTHS OLD WITH SIGNS OF PNEUMONIA

Ram is six months old. Until now he has been a healthy baby; he is strong and he has grown well. But two days ago Ram got sick. He has a cough and a fever. He seems to be having trouble breathing. He is still taking breast milk. His mother, Hari Maya asks you what she thinks she should do. What do you advice?

CASE C: TWO YEAR OLD WITH COUGH

Your friend, Kiran, has a little boy, two years old. Sunil has been sick for more than a week. It started with a runny nose. Sunil didn't seem to be bothered by it, he was eating and playing as usual. He also had a dry cough. For the last two days he seems to have a low fever and he makes a "wet" noise when he breathes, but he is not breathing fast or hard. He is still eating alright. What should Kiran do?

CASE D: TWO YEAR OLD WITH SIGNS OF PNEUMONIA

Sunita is two years old and she is sick. This is the second time that she has been sick this year. Three months ago she was sick with a high fever, but it went away after a couple of days and she was fine. Now she has a fever again. This fever started two days ago. Sunita does not want to eat and she won't, play with her brothers and sisters. Pushpa, her mother, sees that she seems to be breathing fast. What advice would you give Pushpa about what she should do?

CASE E: NEONATE WITHOUT SIGNS OF PNEUMONIA

Sarita's new baby daughter, Syani, is almost three weeks old. She has a "sniffle" with some mucus coming from her nose, but she doesn't have any fever and she is nursing well. Sarita asks for your advice about what she should do. What do you think?

CASE F: NEONATE WITH SIGNS OF PNEUMONIA

Suman is a young baby; he was born about a month ago. His mother, Laxmi sees that he is not well. He doesn't want to nurse; he seems very sleepy and doesn't want to wake up when she holds him. His breathing is irregular but Laxmi remembers that her older child also had irregular breathing when he was a new born. What advice would you give her about Suman?