

Partnerships in the Hills of Nepal  
For Maternal and Child Survival  
Through Local Women Health Workers

Cooperative Agreement No. FAO-A-00-99-00049-00  
September 30, 1999 - September 30, 2003

**CS-15 Nepal**  
**Report of the Final Evaluation**

Submitted to USAID/BGH/HIDN  
December 31, 2003

## ACKNOWLEDGEMENTS

Heartfelt thanks go to the following individuals, each of whom contributed to the success of the CS-15 Child Survival Project in Nuwakot and this evaluation through their thoughtful insights and hard work under often difficult circumstances.

Ms. Naramaya Limbu, Ms. Chandra Rai, Mr. Netra Prasad Bhatta, Dr. Tariq Ihsan, Dr. Eric Starbuck, and the other Save the Children staff in Kathmandu, Nuwakot and the U.S.

The members of the Final Evaluation Team:

- Dr. Tariq Ihsan, Asia Area Health Advisor, SC Pakistan
- Dr. Sun Lal Thapa, Chief, ARI/CDD Section, Child Health Division, MOH
- Dr. Ganga Shakya, Chief, RH Section, Family Health Division, MOH
- Dr. Sushil Nath Paykurel, DHO, Nuwakot
- Mr. Umesh Dhakal, Health Director, NRCS, Kathmandu
- Mr. Indra Mani Dhakal, District Education Officer, Nuwakot
- Mr. Laba Dev Awasti, Vice Secretary, MOE

The Nuwakot and Kathmandu staff and volunteers of Nepal Red Cross Society, the District Health Office and Save the Children, including the following:

- Mr. Bishnu Nepal, President, NRCS, Nuwakot
- Mr. Santa Kumar Dangol, Health Coordinator, NRCS Nuwakot
- Ms. Dewaki Khatiwada, RHO, NRCS Nuwakot
- Mr. Jay Shrestha, BCC Officer, NRCS Nuwakot
- Mr. Ram Prasad Joshi, Team Leader, NRCS Nuwakot
- Mr. Ram Sharan Pyakurel, IMCI Focal Person, DHO Nuwakot
- Ms. Dan Maya Thapa, Public Health Nurse, DHO Nuwakot
- Mr. Bal Mukunda Dongol, Statistical Assistant, DHO Nuwakot
- Mr. Amrit Maharjan, EPI Supervisor, DHO Nuwakot
- Ms. Naramaya Limbu, Health Team Leader, SC Kathmandu
- Ms. Chandra Rai, Sr. Program Officer, SC KTM
- Mr. Netra Prasad Bhatta, CS-15 Coordinator, SC Nuwakot.
- Mr. Krishna Gurung, DPM, SC Nuwakot.
- Mr. Ishwor Khatri, ED/CD Officer, SC Nuwakot.

The many community members, volunteers, health workers and staff who responded to this evaluation with openness and honesty during a very difficult time.

Garth Osborn, Final Evaluation Team Leader

## TABLE OF CONTENTS

Acronyms.....	4
A. Summary.....	9
B. Assessment of Results and Impact of the Program.....	11
1. Results Summary Chart.....	11
2. Technical Approach.....	15
a. Overview.....	15
b. Progress by Intervention.....	17
i. Pneumonia Case Management.....	17
ii. Control of Diarrheal Disease.....	19
iii. Maternal/Newborn Care.....	21
iv. Child Spacing.....	25
c. New Tools/Approaches, Operational Research and Special Studies.....	27
d. Cross-Cutting Approaches.....	27
i. Communication for Behavior Change.....	27
ii. Capacity Building.....	31
1. Strengthening SC.....	31
2. Strengthening Local Partners.....	32
3. Strengthening Health Facilities and Workers.....	33
4. Training.....	37
iii. Sustainability Strategy.....	38
3. Program Management.....	41
a. Planning.....	41
b. Staff Training.....	41
c. Supervision of Program Staff.....	42
d. Human Resources and Management.....	42
e. Financial Management.....	43
f. Logistics.....	43
g. Information Management.....	44
h. Technical and Administrative Support.....	45
i. Management Lessons Learned.....	45
4. Other Issues Identified by the Team.....	46
5. Conclusions and Recommendations.....	46
6. Results Highlight.....	52

### Attachments

- A. Team members
- B. Final Evaluation Methodology
- C. Persons Interviewed and Contacted
- D. Questionnaires
- E. “Final Assessment Report of Selected Mothers/Caregivers and FCHVs in Management of <5 Children with ARI and Diarrhea at Home,” by Nandika Devi Shakya
- F. “Final Assessment Report: MNC & OFAC Intervention Program,” by Narbada Thapa
- G. Organizational Capacity Assessment Reports
- H. Cotrimoxazole Sale Report in Ilaka Numbers 12 and 13, Nuwakot, May 2001. Prepared by Netra Prasad Bhatta
- I. “A Report on PRA in Nuwakot, District,” by Dr. Tariq Ihsan

## ACRONYMS

AHW	Auxiliary Health Worker
ANC	Antenatal Care
ANM	Auxiliary Nurse-Midwife
ARI	Acute Respiratory Infections
BASICS	Basic Support for Institutionalizing Child Survival (USAID Project)
BCC	Behavior Change Communication
BCG	Tuberculosis Vaccine (Bacillus Calmette-Guerin)
BEOC	Basic Emergency Obstetric Care
BF	Breastfeeding
BHR/PVC	Bureau for Humanitarian Response, Office of Private and Voluntary Cooperation of USAID
BP	Blood Pressure
BPP	Birth Preparedness Package
CBAC	Community-Based ARI/CDD
CB-IMCI	Community-Based Integrated Management of Childhood Illness
CCM	Community Case Management
CCT	Control Cord Traction
CD	Community Development
CDD	Control of Diarrheal Disease
CDO	Chief District Officer
CDP	Community Drug Program
CEDPA	The Centre for Development and Population Activities
CHW	Community Health Worker
CMA	Community Medicine Auxiliary (a type of Auxiliary Health Worker)
CORE	The Child Survival Collaborations and Resources Group
CPR	Contraceptive Prevalence Rate
CS	Child Survival
CS-15	Child Survival 15 (The child survival program in Nuwakot, funded in part through the 15 <sup>th</sup> cycle of the BHR/PVC program.)
CSA	Clinical Skills Assessment
DA	Development Assistance
DD	Diarrheal Disease
DEO	District Education Officer

DHO	District Health Office or District Health Officer
DIP	Detailed Implementation Plan
DMPA	Injectable Contraception (Depo-Provera)
DPM	District Program Manager (of Save the Children in Nuwakot)
DPT	Diphtheria, Pertussis and Tetanus Vaccine
DTOT	District Training of Trainers
ECD	Early Childhood Development
ED	Education
EOC	Emergency Obstetrical Care
EPI	Expanded Program on Immunization
FCHV	Female Community Health Volunteer
FE	Final Evaluation
FGD	Focus Group Discussion
FP	Family Planning
GH/HIDN	Bureau for Global Health, Office of Health, Infectious Diseases and Nutrition of USAID
GON	Government of Nepal
HA	Health Assistant
HC	Health Coordinator
HF	Health Facility
HFO	Himalayan Field Office (of Save the Children, covering Nepal and Bhutan)
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HMIS	Health Management Information Systems
HO	Home Office of Save the Children in Westport, CT
HP	Health Post
HRD	Human Resources Development
HTL	Health Team Leader
IC	Ilaka Coordinator
IEC	Information, Education, and Communication
IHMIS	Integrated Health Management Information System
IM	Intramuscular
IMCI	Integrated Management of Childhood Illnesses
IMR	Infant Mortality Rate
INGO	International Non-Governmental Organization

IU	International Unit
IV	Intravenous
JD	Job Description
JJ	Jeevan jal (Oral Rehydration Solution)
JSI	John Snow International
KOICA	Korean Overseas International
KPC	Knowledge, Practice, and Coverage (survey)
KTM	Kathmandu
LDO	Local Development Officer
LMIS	Logistics Management Information System
MCH	Maternal and Child Health
MCHW	Maternal and Child Health Volunteer
MDO	Monitoring and Documentation Officer (of SC in Nuwakot)
M&E	Monitoring and Evaluation
MGHP	Mothers Group Health Program
MNC	Maternal and Newborn Care
MNT	Maternal and Newborn Tetanus
MOE	Ministry of Education
MOH	Ministry of Health
MOU	Memorandum of Understanding
MTE	Midterm Evaluation
MWRA	Married Women of Reproductive Age
NFE	Non-Formal Education (refers to literacy classes or training)
NFO	Nepal Field Office of Save the Children
NGO	Non-Governmental Organization
NIDS	National Immunization Days
NRCS	Nepal Red Cross Society
OD	Organizational Development
OFAC	Obstetric First Aid and Care
OPD	Out-Patient Department
OR	Operations Research
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PCM	Pneumonia Case Management

PE	Parenting/Caregiver Education
PHC	Primary Health Care/Primary Health Center
PHCC	Primary Health Care Center
PHCCI	Primary Health Care Center Incharge
PHO	Public Health Officer
PHP	Parenting Health Program
PLA	Participatory Learning and Action
PLG	Program Learning Group (of Save the Children)
PNC	Postnatal Care
PPC	Postpartum Care
PRA	Participatory Rapid Appraisal
PO	Program Officer
PVO	Private Voluntary Organization
RC	Red Cross (Nepal Red Cross Society)
RH	Reproductive Health
RHO	Reproductive Health Officer (of Save the Children/NRCS in Nuwakot)
R/R	Respiratory Rate
Rs.	Rupees
Rx.	Treatment
SC	Save the Children Federation, Inc. (US)
S/HA	Senior Health Assistant
SHP	Sub-Health Post
SHPI	Sub-Health Post In-charge
SN	Staff Nurse
SNL	Saving Newborn Lives Initiative, funded by Bill & Melinda Gates Foundation
STI	Sexually-Transmitted Infections
TA	Technical Assistance
TBA	Traditional Birth Attendant
TH	Traditional Healer
TTBA	Trained Traditional Birth Attendant
TOT	Training of Trainers
TT	Tetanus Toxoid (immunization)
UN	United Nations
UNDP	United Nations Development Programmes

UNICEF	United Nations Children's Fund
US	United States
USAID	United States Agency for International Development
VDC	Village Development Committee (refers to the committee, and to the geographic area from which VDC members are elected.)
VHW	Village Health Worker
WHO	World Health Organization

## *A. Summary*

Save the Children US (SC) has been implementing a CS-15 Project in partnership with the Nepal Red Cross Society (NRCS) and the District Health Office (DHO) throughout Nuwakot District in Nepal since October 1999. Nuwakot District is a rural hill district located northwest of Kathmandu, ranging in altitude from 518 to 4,876 meters, and covering 1,121 square km. Although the district borders Kathmandu, its proximity had not substantially enhanced health status or access to health and other development services for most of its people prior to the start of this project. The total population of the district is 288,478 with an estimated 44,137 infants and children under five and 62, 876 women of reproductive age, for a total beneficiary population of 107,013.<sup>1</sup> The project goal was a sustained reduction in under-five and maternal mortality in Nuwakot District, which was to be achieved through the attainment of 20 objectives covering capacity building, sustainability and the project's four CS intervention areas – control of diarrheal diseases, pneumonia case management, maternal newborn care and child spacing.

This evaluation was implemented during the summer of 2003, a time of tension and conflict throughout Nepal and within the project area, brought on by an eight-year civil war. This conflict has led to insecurity and instability in Nepal's rural areas in particular – limiting government services, economic development and many aspects of traditional Nepali village life. On August 27, 2003, the second day the Final Evaluation Team met in Kathmandu, the situation deteriorated. As a result, the Team Leader, along with senior SC/Nepal staff, and FE Team members in consultation with SC/HO decided that the evaluation would need to be done from Kathmandu without travel to the field by the FE Team. This meant that members of the FE Team would not be able to view the project site or meet with community members, volunteers and many of the local staff directly to gain first-hand perspectives. This put added strain on the project staff, as it is far more effective and enlightening to show a project than attempt to describe it verbally. Fortunately, the FE Team had the benefit of reviewing and interviewing the authors of two assessment studies that were done in Nuwakot earlier in the summer that provided team members an impartial and informed view of what was happening in the project area with regard to the project's interventions.

The FE Team identified the following main accomplishments of CS-15:

- 535 Female Community Health Volunteers are now equipped to assess and treat life-threatening childhood pneumonia.
- 53 Maternal and Child Health Workers are better able to assist with safe deliveries and respond to obstetric emergencies.
- Key maternal health services have increased significantly since the project baseline, with antenatal visits increasing nearly three-fold, trained health provider-assisted deliveries increasing by two and a half times, and postpartum visits increasing by nearly three times.
- Training capacity in the Community-Based Integrated Management of Childhood Illness and Safe Motherhood is institutionalized within the DHO.
- In the eyes of the community and the evaluation team, the relationship between the DHO and NRCS staff is seamless.
- Community health workers and volunteers are now better trained and more highly respected by the communities they serve and the health care system they support.

---

<sup>1</sup> 2001 Government of Nepal Census.

This CS-15 project was unique in that it did not use a knowledge-practice-coverage (KPC) survey as commonly done in most CS projects. Rather, it relied more on its HMIS to assess achievements. In comparing the baseline and final evaluation results the following highlights were found:

**Capacity Building:** The project established training capacity and supply systems for project-related commodities within the DHO. Even though there was marked improvement in reporting within the DHO, it did not reach the level of consistency aimed for, perhaps due in large part to the security situation.

**Sustainability:** The levels of service for MNC and PCM established by the project were nearly maintained or exceeded two years after the departure of project staff concluded their work in the Phase I communities. This implies solid prospects for the continuation of these services close to the same levels established during CS-15.

**Control of Diarrheal Disease:** The project established an ORT corner in each of Nuwakot's health facilities and successfully trained FCHVs to assess, counsel and treat DD. Caregiver practices of increasing fluids during DD and knowledge of the associated danger signs both exceeded their targets. While caregiver practices of providing more foods during DD, did not reach its target, positive progress was achieved here as well.

**Pneumonia Case Management:** The project greatly expanded access to PCM in the more remote communities through the sale of cotrim through project-trained FCHVs, increased caretaker knowledge, and training of traditional healers.

**Maternal and Newborn Care:** The project increased use of ANC, PPC and assistance by trained health workers at deliveries, as well as improved MNC quality through training and the provision of BEOC kits to MCHWs and MOH facilities.

**Child Spacing:** The project increased MCHW competency in FP counseling and in the provision of DMPA.

In total, the project met or exceeded four fifths of its objective targets (16/20) and experienced positive movement on the remaining four, as further detailed in the Results Chart in the next section. Therefore, CS-15 is likely to have had a positive impact on its goal of sustained reduction in under five and maternal mortality in Nuwakot District

## B. Assessment of Results and Impact of the Program

### 1. Results Summary Chart

Objectives	Indicators	Means of Verification	Results
<b>Capacity Building Objectives</b>			
1. 80% of trained FCHVs have adequate stocks of cotrim., after CS-15 staff depart the area.	<u>DHO</u> : % of FCHVs with minimum stocks of cotrim. in areas without CS-15 staff.	Occasional visits to FCHVs by CS-15 staff in CS-15 Phase I VDCs during Phase II (& during CS-15 final evaluation?).	91% (118/130) of FCHVs from Phase I communities had adequate cotrim stocks in 2003. <sup>2</sup>
2. 80% of SHPs have adequate stocks of essential BEOC and FP supplies, in areas without CS-15 staff.	<u>DHO</u> : % of SHPs with adequate stocks of essential BEOC and FP supplies, in areas without CS-15 staff.	Occasional visits to SHPs by CS-15 staff in CS-15 Phase I VDCs during Phase II (& during CS-15 final evaluation?).	91% of MCHWs (32/35 sampled across the entire district) had BEOC Kits complete with equipment and 88% were complete or mostly complete. <sup>3</sup>  Each of the SHPs throughout the district had complete stock of both BEOC and FP supplies, although the report did not specify which supplies were present. <sup>4</sup>
3. 80% of facilities submit logistics management reports correctly and on time, in areas without CS-15 staff. <sup>5</sup>	<u>DHO</u> : % of facilities submitting logistics management reports correctly and on time, in areas without CS-15 staff.	Review by CS-15 staff during CS-15 Phase II of reports sent by HPs/ PHCs/ DHO in CS-15 Phase I VDCs.	In 2003, the DHO reported that 65% of SHPs were submitting their reports to the HPs correctly and on time, and 100% of HPs were submitting their reports on time to the DHO.
4. 80% of NRCS SNs/ ANMs demonstrate competency in CBAC training of FCHVs.	<u>NRCS</u> : % of SNs/ANMs demonstrating competency in CBAC training of FCHVs.	Observation by SC staff of SNs/ANMs skills & methods using checklist during CBAC training.	Of NRCS staff, 7 ANMs and 7 SNs were trained to be TOTs for FCHVs on CBAC. Observation of the 14 NRCS staff was done during the training they provided to FCHVs. It was found that two required additional training and support. This was provided and under subsequent observation it was found that all 14 were competent in providing the CBAC training to FCHVs. <sup>6</sup>

<sup>2</sup> The April-June 2003 Quarterly CB-IMCI Supervision and Followup of FCHV/MCHW/VHW Report.

<sup>3</sup> Final Assessment Report on MNC and OFAC Intervention Program.

<sup>4</sup> The NRCS District Quarterly Report (January – March 2003).

<sup>5</sup> During the CS-15 baseline health facility assessment, logistic management information reports were found to be correctly and the completely filled-out and submitted on time by one-third of the sampled health facilities, while two-thirds of the facilities were found submitting quarterly reports of their stocks.

<sup>6</sup> March 2002 CB-IMCI Followup Report. CS-15 Nepal Final Evaluation. Save the Children, December 2003.

<b>Objectives</b>	<b>Indicators</b>	<b>Means of Verification</b>	<b>Results</b>
5. BCC Officer & all BCC Supervisors demonstrate competency in training NFE & PE facilitators.	<u>NRCS</u> : # of BCC staff demonstrating competency in training NFE & PE facilitators.	Observation by SC staff of BCC Officer/ Supervisors skills & methods using checklist during NFE and PE facilitators' training.	All eight BCC Officers and Supervisors attended training on PLA Program and Parenting Program Master Level TOT. <ul style="list-style-type: none"> <li>➤ Their knowledge scores improved from an average score of 9% in the pre-test to an average score of 86% at post-test.</li> <li>➤ The average score they received for Teaching Methodology was 96%.</li> <li>➤ The average score they achieved during observation of their facilitation skills was 97%.</li> </ul>
<b><u>Sustainability Objectives</u></b>			
6. Number of episodes of pneumonia treated per child per year through FCHVs remains stable after CS-15 staff depart.	<u>PCM/Use</u> : Rate of FCHV pneumonia treatment, in areas without CS-15 staff, compared to same areas before staff departed, and to areas with CS-15 staff	Review by CS-15 staff during CS-15 Phase II of reports received by HPs/PHCs/DHO from CS-15 Phase I VDCs	In 2001 in Phase I communities 0.09 pneumonia episodes were treated per child per year by FCHVs. In 2003 the rate was 0.08.
7. Number of MCHW contacts for antenatal care, deliveries, and postpartum care remains stable, after CS-15 staff depart.	<u>MNC/Use</u> : Number of MCHW contacts for antenatal care, deliveries, and postpartum care, compared for areas with and without CS-15 staff.	Data from SHP logs reviewed by CS-15 staff during occasional CS-15 Phase II visits to Phase I SHPs (& during CS-15 final evaluation?).	In the Phase I communities: <ul style="list-style-type: none"> <li>➤ ANC increased from 2.8 sessions per MCHW per month in 2001 to 8.56 in 2003.</li> <li>➤ Deliveries by skilled health providers increased from 0.5 per MCHW per month in 2001 to 1.24 in 2003.</li> <li>➤ PPC increased from 0.6 in 2001 to 2.0 in 2003.<sup>7</sup></li> </ul>
<b><u>Control of Diarrheal Disease Objectives</u></b>			
8. 80% of trained FCHVs correctly assess, treat, and counsel for diarrhea.	<u>Quality</u> : % of CS-15 CDD-trained FCHVs correctly assessing, treating, and counseling for diarrhea.	Periodic observation of 1 follow-up visit each by FCHV of recently seen child by SC/RC staff using checklist. (and/or observation of FCHVs during refresher training.)	87% (120/138) of FCHVs in Phase I communities were correctly assessing, treating and counseling for diarrhea in 2003. In Phase II communities it was 98%. (335/342). <sup>8</sup>
9. 80% of recently counseled caretakers report following 3 rules of home care.	<u>Quality</u> : % of caretakers recently counseled by CS-15-trained FCHVs who report following 3 home care rules.	Periodic visits to households of recently treated cases by SC/RC staff using checklist (& during CS-15 mid-term and/or final evaluation?).	Of caregivers surveyed, <ul style="list-style-type: none"> <li>➤ 87% (82/94) reported giving more fluids than usual.</li> <li>➤ 66% (62/94) reported giving more food than usual.</li> <li>➤ 62% (58/94) reported being told the danger signs requiring medical treatment.<sup>9</sup></li> </ul>

<sup>7</sup> Final Assessment Report on MNC and OFAC Intervention Program, page 28

<sup>8</sup> The Project Annual Report for 2003

<sup>9</sup> Final Assessment Report of Selected Mothers/Caregivers, FCHVs in Management of Under-Five Children with Pneumonia and Diarrhea.

<b>Objectives</b>	<b>Indicators</b>	<b>Means of Verification</b>	<b>Results</b>
10. 80% of HFs have ORT corners in place with essential supplies. <sup>10</sup>	<u>Availability</u> : % of health facilities with ORT corners and essential ORT corner supplies.	Periodic visits to HFs by DHO/SC/RC staff using checklist (& during CS-15 mid-term and/or final evaluation?).	All 65 health facilities were provided with ORT Corners. <sup>11</sup> 86% (24/28) facilities assessed had a functioning ORT corner in 2003. <sup>12</sup>
<b><u>Pneumonia Case Management Objectives</u></b>			
11. Documented results of operations research on Cotrimoxazole sale by FCHVs.)	<ul style="list-style-type: none"> <li>• # of cases treated vs. cotrim. Stock.</li> <li>• % of FCHVs with sales records.</li> <li>• Revenue collected.</li> <li>• Rates of FCHV pneumonia treatment over time.</li> <li>• Burden on FCHVs.</li> <li>• Community satisfaction with FCHV services.</li> </ul>	<ul style="list-style-type: none"> <li>• Review of FCHV records and cotrim. Stock.</li> <li>• Review FCHV records.</li> <li>• Review FCHV records.</li> <li>• Review FCHV records.</li> <li>• Interviews with FCHVs &amp; VHVs.</li> <li>• Key informant &amp; FGDs with community leaders, FCHV clients &amp; non-clients.</li> </ul>	This objective was achieved and covered in the MTE and Cotrim Sale Assessment Reports. <sup>13</sup>
12. PCM available through FCHVs in 90% of wards	<u>Availability</u> : % of wards with PCM-trained FCHVs and adequate stock of cotrim.	Check lists from periodic SC/RC visits to FCHV (& during CS-15 mid-term and/or final evaluation?).	Each of the 549 Wards has at least one trained FCHV. In addition, 91% (500/549) of FCHVs have adequate stocks of cotrim (Reference objective #1).
13. 80% of trained FCHVs correctly assess, treat, & counsel for pneumonia.	<u>Quality</u> : % of PCM-trained FCHVs correctly assessing, treating, & counseling for pneumonia cases.	Periodic observation by SC/RC staff using checklist during periodic visits to FCHVs of 1 follow-up visit each by FCHV of child on Rx (and/or observation of FCHVs during refresher training.)	Of the trained FCHVs, 89% (99/112) in Phase I communities were able to correctly assess, treat, and counsel for pneumonia in 2003. In Phase II communities the rate was 98% (230/235).
14. 80% of caretakers give proper dose & course of cotrim.	<u>Quality</u> : % of caretakers at follow-up reporting correct dose & course fed.	SC/RC staff interviews with caretakers of children recently treated by FCHVs during periodic field visits (& during CS-15 mid-term and/or final evaluation?).	99% of caretakers were providing the proper dose and course of cotrim. <sup>14</sup>

<sup>10</sup> Baseline value from CS-15 health facility assessment = 9%

<sup>11</sup> Third Annual Report.

<sup>12</sup> Second Quarter 2003 IMCI Followup Report

<sup>13</sup> Reference the 2001 Report, "Cotrimoxazole Sale Assessment" (Attachment H) and page 29 of the MTE Report.

<sup>14</sup> Final Assessment Report of Selected Mothers/Caregivers, FCHVs in Management of Under-Five Children with Pneumonia and Diarrhea.

<b>Objectives</b>	<b>Indicators</b>	<b>Means of Verification</b>	<b>Results</b>
15. 0.2 to 0.5 episodes of pneumonia treated per child per year. <sup>15</sup>	<u>Use</u> : District-wide combined rate of treatment of childhood pneumonia through all facilities, VHWs, FCHVs.	Combined reports of pneumonia treatment by facilities, VHWs, FCHVs, through DHO reports periodically monitored by CS-15 staff.	In 2002 the number of pneumonia episodes treated per child per year was 0.14. By annualizing 2003 rates to date, it was found that the number has increased to 0.21.
<b>Maternal Newborn Care Objectives</b>			
16. Documented results of training & supporting MCH Workers in RH & Basic Emergency Obstetric Care, based on new MOH MCHW RH curriculum.	<ul style="list-style-type: none"> <li>• Change in MCHW case loads by type.</li> <li>• Problems encountered by MCHWs.</li> <li>• Quality of services provided by MCHWs.</li> <li>• Community satisfaction with MCHW services.</li> </ul>	<ul style="list-style-type: none"> <li>• DHO reporting system &amp; SHP registers.</li> <li>• Interviews with MCHWs.</li> <li>• End of training tests, interviews with recent clients, observation of MCHWs.</li> <li>• Key informant &amp; focus group interviews with community leaders, recent MCHW clients &amp; non-clients.</li> </ul>	The results of the training and support of MCH Workers is documented in the attached report, <i>Final Assessment Report on MNC and OFAC Intervention Program</i> .
17. BEOC available through MCHWs trained in RH at 70% of SHPs.	<u>Availability</u> : % of SHPs with MCHW trained in BEOC (based on new MOH RH curriculum) and essential BEOC supplies.	Review of DHO logistics management information system reports, CS-15 staff visits to SHPs (& during CS-15 mid-term and/or final evaluation?).	94% (50/53) MCHWs trained in BEOC and currently operating throughout the district.
18. 70% of trained MCHWs competent in MNC/BEOC. (70%)	<u>Quality</u> : % of CS-15-trained MCHWs competent in MNC & BEOC.	Observation checklists & interviews by CS-15 staff during visits to SHPs, post-training evaluations (& during CS-15 mid-term and/or final evaluation?).	<p>The average scores of the MCHWs, whose skills were tested in May 2003 were as follows:</p> <p>ANC: 83%  Normal Deliveries: 89%  Postnatal Care: 76%  Newborn Care: 91%</p> <p>96% (35/36) of the MCHWs could demonstrate skill in two or more EOC procedures in May 2003.<sup>16</sup></p>

<sup>15</sup> Baseline estimate = 0.066 episodes of pneumonia treated per child per year by all health facilities. (This excludes treatment by the 42 CS-11 PCM-trained FCHVs)

<sup>16</sup> Final Assessment Report on MNC and OFAC Intervention Program. CS-15 Nepal Final Evaluation. Save the Children, December 2003.

Objectives	Indicators	Means of Verification	Results
19. 200% increase in MCHW contacts for antenatal care, deliveries, & postpartum care. <sup>17</sup>	<u>Use</u> : % increase in MCHW contacts for antenatal care, deliveries, and postpartum care.	Review by CS-15 staff of data obtained through routine DHO reporting, and review of SHP registers during visits by CS-15 staff.	The number of ANC sessions provided per MCHW per month in 2003 was 8.6 – a 128% increase from the baseline of 3.75.  The number of deliveries attended per month by each MCHW in 2003 was 1.2 – an increase of 226% from the baseline .38.  The number of PPC sessions provided per MCHW per month in 2003 was 2.0 – an increase of 63% from the baseline of 1.25. <sup>18</sup>
<b><u>Child Spacing/Family Planning Objective</u></b>			
20. 90% of trained MCHWs & VHWs competent in FP counseling & providing DMPA.	<u>Quality</u> : % of CS-15-trained MCHWs & VHWs competent in FP counseling & providing DMPA.	MCHW/VHW end of training evaluations, with simulations of injection & counseling (& during CS-15 mid-term and/or final evaluation?).	The average test scores for the MCHWs on FP counseling in FP and providing DMPA was 92%. For VHWs it was 91%. This was assessed during regular monitoring & supervision visits. <sup>19</sup>

## **2. Technical Approach**

### **a. Overview**

Save the Children (SC) began working in Nepal in 1981 with one Village Development Committee in Gorkha District. During the following 23 years, SC programs in Nepal have grown and diversified to where they are now being implemented in over 20 districts and covering all five development regions of the country.

SC has implemented five CS projects in Nepal, three of which were in Nuwakot District. Nuwakot is a rural hill district, located northwest of Kathmandu and is transected by a road linking Kathmandu with the district headquarters, Bidur municipality (Trisuli Bazaar), and some feeder roads. Most villages in the district, however, are not accessible by road and many are a several day walk from the main road. Although the district borders Kathmandu, the “Health Development Index” (comprised of IMR, CPR, and access to safe drinking water) for Nuwakot was the 20<sup>th</sup> worst of all 75 districts in the Kingdom at the time the project was preparing its DIP.

The District is divided into 13 “ilakas.” Each ilaka contains an average of five “Village Development Committees” (VDCs), which refer both to these governing committees and to the geographic areas from which their members are elected. There are 61 VDCs and one municipality in Nuwakot District. Each VDC contains nine “wards,” the smallest administrative division. SC’s previous smaller CS-8 and CS-11 grants in Nuwakot covered 14 VDCs in the eastern part of the district. These 14 VDCs, along with another 18 VDCs in the central part of the District, were selected as CS-15 Phase I VDCs. The remaining 29 VDCs of Nuwakot, in the

<sup>17</sup> Baseline values from CS-15 health facility assessment for MCHW contacts for antenatal care = 3.75 contacts per MCHW per month, deliveries = 0.38, & postpartum care = 1.25

<sup>18</sup> Final Assessment Report on MNC and OFAC Intervention Program. Page 28.

<sup>19</sup> 2003 Annual Report

CS-15 Nepal Final Evaluation. Save the Children, December 2003.

west and south of the District, were targeted for CS-15 Phase II activities that received project services in the last two years of the project.

Buddhists of the Tamang ethnic group constitute by far the largest ethnic group, accounting for 35% of Nuwakot's population. The Tamang are one of the most disadvantaged ethnic groups in the country for whom health outcomes, including infant mortality, have been found to be among the worst in Nepal. Most of the remaining population is of the Hill Hindu Castes. Although Nepali is not the native tongue of much of the population, it is spoken by most.

In February 1996, a guerrilla war began against the Government of Nepal, which continues to this day. The conflict has led to insecurity and instability in the rural areas in particular – limiting government services, economic development and many aspects of traditional Nepali village life. (See the Section Other Issues Identified by the FE Team and the Methodology Annex to this report detailing the approach undertaken for this evaluation.)

The goal of SC's project, Partnerships in the Hills of Nepal for Maternal and Child Survival through Local Women Health Workers, was sustained reduction in under five and maternal **mortality** in Nuwakot District, Nepal. The project targeted the following results:

- R-1:** Increased use of key health **services** and **practice** at household level of selected maternal and child survival emphasis behaviors in Nuwakot.
- R-2:** Demonstrated **capacity** of Nuwakot Red Cross to train, and district health services to support, local women health workers.
- R-3:** **Sustained** delivery of selected maternal and child survival services by local women health workers in Nuwakot.

The project focused on a limited number of interventions:

- Maternal and Newborn Care (35% estimated total project effort)
- Pneumonia Case Management (40%)
- Control of Diarrheal Diseases (15%)
- Child Spacing (10%)

The project's main strategies were:

- Training of Female Community Health Volunteers (FCHVs) to deliver CDD and PCM services at the community level, including Cotrimoxazole sale by FCHVs for treatment of childhood pneumonia.
- Training of Sub-Health Post staff in MNC and FP.
- On-the-job support of FCHVs and MCHWs trained by CS-15.
- Focused behavior change communication and community mobilization to improve health behaviors at the household level and the quality of health services from the community perspective.

This CS project had several unique aspects, which included:

- The project was implemented in two phases – Phase I in the eastern half of Nuwakot in the first two years and Phase II in the western half for the last two years. The project ceased direct operations in the Phase I communities after the second year of the project, which provided lessons learned to inform implementation in Phase II communities and an opportunity to assess whether the Phase I communities could continue to provide the project-developed services after the departure of project staff.
- Unlike the majority of CS projects, this one did not use a Knowledge-Practice-Coverage (KPC) survey. Instead it relied almost entirely on on-going monitoring data from supervisory visits, supervisory checklists, and review of reports produced through the project's HMIS and from the MOH/DHO reporting system.
- This project relied heavily on the local partners (DHO and NRCS), to implement the day-to-day project activities. SC's role was primarily that of technical advisor, trainer, mentor, organizer and capacity builder. All the direct services and field level trainings, meetings and events were implemented by the local partners. This was mirrored in the project budget, which provided most of the financial resources to NRCS.

***b. Progress by Intervention Area***

***i. Pneumonia Case Management (40%)***

CS-15's PCM activities focused on:

- Improving the quality of ARI case management at health facilities,
- Increasing access to Standard Case Management throughout the district by training and supporting FCHVs in PCM, including the sale of Cotrimoxazole, and
- Improving family recognition and prompt care seeking for pneumonia.

***Results:***

***Objective 12:*** Pneumonia Case Management (PCM) available through FCHVs in 90% of wards

***Result:*** Forty-two FCHVs were trained in PCM during CS-11, each of whom was selling cotrim when the Cotrimoxazole-Sale Assessment Report was completed in May 2001. As these FCHVs were from different wards, the baseline rate would have been 8% (42/549). During Phases I and II, 1,007 FCHVs received the five-day long training in PCM, the two-day training on CDD, and the two-day refresher training on PCM/CDD. Out of the 1,007 trained FCHVs, 538 were selected as treatment FCHVs who are assessing, treating and counseling children with pneumonia and selling cotrim. They were each provided 200 tablets of Cotrim as a startup supply. Later, an additional 11 FCHVs were trained to be treatment FCHVs so there would be at least one treatment FCHV per ward. Now each of Nuwakot's 549 wards has at least one FCHV trained in PCM. In addition, 91% of FCHVs have adequate stocks of cotrim in the Phase I communities. The scale-up of this strategy from an initial pilot to district wide services was successful – greatly expanding access to this lifesaving treatment. (See discussion on Objective #1 in the section on Capacity Building below.)

**Objective 13:** 80% of trained FCHVs correctly assess, treat, & counsel for pneumonia.

**Result:** Prior to their training on the use and sale of cotrim, FCHVs were only supposed to recognize ARI symptoms and then refer probable cases to health facilities. Because this project's PCM training was the first one where FCHVs would develop the necessary skills to not only assess but also to treat and counsel, there was no baseline data available for this objective. As reported on in the annual report, in 2003 it was found that 89% (99/112) of trained FCHVs in Phase I communities were able to correctly assess, treat, and counsel for pneumonia and in Phase II communities the rate was 98% (230/235). Therefore, this objective has been exceeded.

**Objective 14:** 80% of caretakers give proper dose & course of cotrim.

**Result:** Again, there was no baseline data available on this Objective because the intervention was just starting at the beginning of CS-15. In May 2003, it was found that 99% (91/93) of caretakers were providing the proper dose and course of cotrim.<sup>20</sup> This objective was exceeded, representing a very solid accomplishment, especially considering the instability in Nuwakot and the newness of this strategy.

**Objective 15:** 0.2 to 0.5 episodes of pneumonia treated per child per year.

**Result:** The baseline estimate was 0.066 episodes of pneumonia treated per child per year at health facilities, not including treatment provided by the 42 CS-11 PCM trained FCHVs. In 2002 the number of pneumonia episodes treated per child per year was 0.14. By annualizing 2003 rates to date, it was found that the rate had increased to 0.21. The 2002 and 2003 rates include treatment at both health facilities as well as by VHWs, MCHWs and FCHV through home-based care. This demonstrates a significant improvement in the identification and treatment of pneumonia cases.

#### ***Factors affecting achievement of program objectives:***

The social marketing of cotrim to treat pneumonia in children is reportedly very popular in Nuwakot with caregivers, FCHVs and health workers at MOH facilities. In FGDs with mothers it was found that they do not mind paying for the medicine. Health workers reported anecdotally that they were not having to treat as many milder cases of pneumonia at health facilities as before because more of these cases were being treated at home with the help of the FCHVs. FCHVs also expressed satisfaction with their newly developed ability to assess and treat pneumonia cases directly, noting that this further increased their self esteem and credibility in the eyes of the community.

In addition to project-trained MOH workers, others were included in the project's PCM health education strategies as well. Traditional healers continue to be a very popular resource in communities for health care and are often the first stop for many caregivers with sick children in need of treatment. The project trained 294 traditional healers in recognizing the pneumonia-related danger signs and the need for referrals. In addition, 773 VDC members and nearly 13,000 mothers group participants received orientation on PCM and CDD covering the same topics.

---

<sup>20</sup> Final Assessment Report of Selected Mothers/Caregivers and FCHVs in Management of Under-Five Children with Pneumonia and Diarrhea at Home.

One factor that possibly limited the potential increase in coverage was the Government of Nepal policy that infants under two months of age with pneumonia symptoms cannot be treated by FCHVs. Currently, FCHVs are only supposed to assess and refer pneumonia cases identified in infants under two months of age to a health facility for treatment. In Focus Group Discussions the FCHVs expressed interest in being taught how to treat these cases, especially in situations where timely access to a health facility is limited.

The growing insecurity throughout Nepal has also had an impact on Nuwakot and this intervention. It has limited the GON's ability to expand the Community Drug Program (which involves the sale of drugs from facilities) beyond 51% (31/61) of Nuwakot's VDCs, which has therefore limited the supply of cotrim at health facilities and, by extension, the FCHVs.

***Lessons Learned:***

Regular supervision and refresher training of the FCHVs has been crucial to ensuring consistency in the quality of their work, especially with regard to accurate assessment, education of caregivers, proper dosing, and referral when necessary.

***Special outcomes, unexpected successes or constraints:***

Nuwakot was the first district in Nepal to use social marketing of cotrim through FCHVs to respond to the need for effective home-based assessment and treatment for childhood pneumonia. It is now being tested in other locations in Nepal, where large portions of the population lack ready access to health facilities.

***Recommendations:***

The PCM-related recommendations are included at the end of the following section on CDD.

***ii. Control of Diarrheal Disease (15%)***

CS-15 CDD activities focused on:

- Improving the quality of counseling by health facility staff and FCHVs on home care for DD,
- Supply of ORS packets to FCHVs and health facilities, and
- Community-wide BCC for improved home care for all DD, and care seeking for serious episodes.

***Results:***

***Objective 8:*** 80% of trained FCHVs correctly assess, treat, and counsel for diarrhea.

***Result:*** There was no baseline rate specific to the FCHVs. The Annual Report for 2003 noted that 87% (120/138) of the FCHVs in Phase I communities were correctly assessing, treating and counseling for diarrhea. In Phase II communities the rate was 98%. (335/342). While this objective was exceeded in both the Phase I and II communities, the difference in these two rates implies that there might have been some slight drop-off in the quality of care in the Phase I

communities after the departure of the CS-15 staff. This demonstrates the importance of on-going supervision and refresher training, both of which were raised by the MOH, FCHVs, MCHWs and others throughout the Final Evaluation.

On a related concern, it was found that FCHV knowledge on the diarrhea-associated danger signs requiring referral was not strong. None of the surveyed FCHVs listed persistent diarrhea (2 weeks+) and only 77% (72/94) said that blood in the stool would require referral to a health facility.<sup>21</sup>

**Objective 9:** 80% of recently counseled caretakers report following three rules of home care.

**Result:** Of caregivers,

- 87% (82/94) reported giving more fluids than usual;
- 66% (62/94) reported giving more food than usual; and,
- 62% (58/94) reported being told the danger signs requiring medical treatment.

While the targets for increased fluids and knowledge of the danger signs requiring medical treatment were exceeded, the target for increasing foods was not achieved, even though 86% (81/94) of caregivers reported that they had been told by their FCHV to give more foods than usual. The reason(s) why more caregivers were not following this advice (e.g., lack of available foods, conflict with traditional beliefs/practices, etc.) should be explored further, building on the PRA study done by Dr. Tariq Ihsan (SC's Asia Regional Health Advisor), especially as SC starts its school nutrition program in Nuwakot. In addition, 97% (91/94) reported giving Jeevanjal (the locally manufactured ORS distributed throughout Nepal by the MOH) to treat diarrhea, which is an excellent achievement.<sup>22</sup>

**Objective 10:** 80% of health facilities have ORT corners in place with essential supplies.

**Result:** The Third Annual Report notes that all 65 health facilities were provided with ORT Corners. As per the Second IMCI Followup Report for 2003, 86% (24/28) facilities assessed had a functioning ORT corner. This represented a significant increase from the CS-15 baseline health facility assessment that found that only 9% of facilities had a functioning ORT corner.

***Factors impacting this intervention:***

The FCHVs are asked to distribute ORS sachets, however, they reported in FGDs that the sachets are only consistently available from health facilities during the seasons of peak demand and not the rest of the year.

Several dangerous traditional practices associated with prevention and treatment of diarrheal disease were identified during the CS-15 baseline. The project has sought to address these issues through its BCC strategies (discussed in detail below) and through the training and support of FCHVs, MCHWs and VHWs who provide health education. However, it should be recognized

---

<sup>21</sup> Final Assessment Report of Selected Mothers/Caregivers and FCHVs in Management of Under-Five Children with Pneumonia and Diarrhea at Home. Table 12 on Page 16.

<sup>22</sup> Final Assessment Report of Selected Mothers/Caregivers and FCHVs in Management of Under-Five Children with Pneumonia and Diarrhea at Home. Table 11 on Page 16.

that these practices take a long time and are difficult to change, especially in rural and isolated communities where there are multiple ethnic groups and languages as well as a long held caste system.

One of the reported difficulties with the ORT corners was the lack of suitable space for the supplies and equipment in the health facilities, which is easily accessible to the clients.

### ***Recommendations:***

The following recommendations cover both the PCM and CDD Interventions:

1. Options for addressing the need for quick and qualified treatment of pneumonia in infants under two months of age need to be identified and considered for adoption at the community level. The Child Health Division and the IMCI Working Group should be approached on this issue by the CS-15 Project partners.<sup>23</sup>
2. The FCHVs in the municipality of Bidur also need to be trained in CB-IMCI by the DHO so the disadvantaged isolated individuals living in the pocket areas that are not currently being reached by the MOH system.
3. A pre/post test package should be developed and incorporated into CB-IMCI training. The Child Health Division of the MOH should be approached by the CS-15 Project partners.
4. The DHO, with the help of the NRCS and SC, should explore reasons why caretakers might not be giving more food than usual during episodes of diarrhea and reasons for the low knowledge on the associated danger signs that require medical attention by reviewing the PRA report and further study if need be. This could be incorporated into the upcoming school nutrition program scheduled to begin fall of 2003. Issues of definition and language may be important, as kids with diarrhea have less appetite, requiring small frequent feeds.

### ***iii. Maternal/Newborn Care (35%)***

CS-15's MNC activities focused on:

- Improving the availability of BEOC to the rural population by introducing BEOC services through SHPs/MCHWs.
- Improving the quality of ANC, delivery (including BEOC), PNC and newborn care provided by MCHWs during home visits and by MCHWs, Staff Nurses and Auxiliary Nurse Midwives at health facilities,
- Improving MNC-related care seeking behaviors.

---

<sup>23</sup> Save the Children/HO noted that “the 1992 WHO materials for ARI case management by CHWs suggested treatment by CHWs if referral was not available, but the Nepal program declined to follow this approach. JSI/Nepal hopes to start a pilot program in two districts of case management of newborn infections in the near future in collaboration with the MOH and with support from SNL/SC/Nepal.”

**Results:**

**Objective 16:** Documented results of training and supporting MCH Workers in RH and Basic Emergency Obstetric Care, based on new MOH MCHW RH curriculum.

**Result:** The complete report documenting this intervention, *Final Assessment Report on MNC and OFAC Intervention Program*, can be found in Attachment F and discussed throughout the remainder of this section. In summary, it found that “training and support of MCHWs in MNC, OFAC and effective BCC activities significantly increased utilization and quality of MNC and OFAC services in Nuwakot District.”<sup>24</sup>

**Objective 17:** BEOC available through MCHWs trained in RH at 70% of SHPs.

**Result:** There is one MCHW providing clinic and home-based maternal child health services from each of the SHPs in Nuwakot District. All 53 MCHW were trained in BEOC and reproductive health. Now 94% (50/53) of these trained MCHWs are providing BEOC and reproductive health services. Each of these MCHWs and all 53 SHPs were supplied with a BEOC kit box.

**Objective 18:** 70% of trained MCHWs are competent in MNC/BEOC.

**Result:** The average scores of the MCHWs tested during observation and simulation exercises in May 2003 were:

- Antenatal Care: 83%.<sup>25</sup> Overall MCHW knowledge of the components of ANC was strong having increased from a baseline of 30%. The two areas in need of further improvement were teaching on birth preparedness (12/36 or 33%) and counseling on breastfeeding (19/36 or 53%).<sup>26</sup>
- Uncomplicated Deliveries: 89%.<sup>27</sup> This also presented a significant improvement over the baseline rate of 19%.
- Postnatal Care: 76%. The overall performance on PNC was strong except for scheduling postnatal followup visits, which resulted in an average score of 47%.
- Newborn Care: 91%.<sup>28</sup> Baseline rates were not available for this objective, however, the performance was strong on all the related tasks.
- 96% (35/36) of the MCHWs surveyed could demonstrate skill in two or more EOC procedures in May 2003.<sup>29</sup>

**Objective 19:** 200% increase in MCHW contacts for antenatal care, deliveries, & postpartum care.

---

<sup>24</sup> Final Assessment Report on MNC and OFAC Intervention Program. Page 40.

<sup>25</sup> Final Assessment Report on MNC and OFAC Intervention Program. Page 15.

<sup>26</sup> Final Assessment Report on MNC and OFAC Intervention Program. Page 10.

<sup>27</sup> Final Assessment Report on MNC and OFAC Intervention Program. Page 15.

<sup>28</sup> Final Assessment Report on MNC and OFAC Intervention Program. Page 17.

<sup>29</sup> Final Assessment Report on MNC and OFAC Intervention Program

## **Results:**

- The number of ANC sessions provided per MCHW per month in 2003 was 8.56 – a 128% increase from the baseline of 3.75.
- The number of deliveries attended per month by each MCHW in 2003 was 1.24 – an increase of 226% from the baseline of .38.
- The number of PPC sessions provided per MCHW per month in 2003 was 2.00 – an increase of 63% from the baseline of 1.25.

The number of MCHWs (one per VDC) is not sufficient to meet the demand or need for MNC services. While access to MCHW services increased substantially during CS-15, coverage for deliveries by skilled health workers remains relatively low at 11% when measured across the district population. This means that even with the increased coverage provided by the project-trained MCHWs, nearly 90% of deliveries are either being done entirely alone or are being assisted by TBAs or untrained individuals, primarily family members and/or neighbors. The ratio of MCHWs to women of reproductive age (estimated at 56,000 at the time of the DIP) is approximately 1:1,120, so even with a tripling of the productivity of each MCHW many women will continue to be underserved and therefore, by itself, this is not a likely solution to the need.

## **Factors Affecting MNC:**

Mothers' satisfaction with the MCHWs appeared to be very high and many reported that they felt free to ask questions and that their MCHW was a good listener. This was corroborated by health workers who expressed satisfaction in the work of the MCHWs, with one stating that "MCHWs' competency and the level of comfort that community women feel with her is responsible for an increase in the utilization of MCHW services."<sup>30</sup> In addition, a majority of MWRA were willing to pay for MCHWs services, saying that a reasonable amount would be NRCS 1,000 to 1,200 for a delivery.

Distances and proximity to the health facility also affects MCHW services. While two thirds of the mothers live within an hour's walk from the nearest SHP, with a mean distance of 39 minutes and the farthest about 2.16 hours,<sup>31</sup> it can take 2 to 2 ½ hours for the mother to get to a MCHW. The average distance between a MCHW and the health facility where she works is 1.4 hours. The MCHWs are also not generally available 24/7. This is due in part to the fact that several MCHWs do not live in the VDC where they work, which not only increases the distances they must travel, but also means that they are less familiar to and with the communities they serve.

One possible means for improving MNC access is to return to supporting Traditional Birth Attendants (TBAs), whom many women say they continue to use because of their proximity, familiarity, and availability 24/7. This appears to be especially true in areas where access to MCHWs and health facilities are limited, which includes much of Nuwakot. In FGDs, many women said they were using local TBAs for normal deliveries and calling on the MCHW when complications arise. In the past the Government of Nepal trained and supported TBAs throughout the country with an 11 day course followed by a ten-day refresher training. The DHO in Nuwakot reported that an estimated 240 trained TBAs are in place in the district,

---

<sup>30</sup> Ibid. Page 36.

<sup>31</sup> Final Assessment Report on MNC and OFAC Intervention Program. Page 25.

however, this training is no longer being provided due to changes in government policy. The DHO recommended that they should be trained to promote referral for ANC and PNC as well as support for clean delivery.

One possible factor affecting facility-based deliveries could be the recognition that the AHWs might be the only health worker at the health facility and the majority are males, whom women are not comfortable using.<sup>32</sup>

The community's understanding of the role of the MCHWs has improved since the midterm evaluation as reported anecdotally in the FGDs. This was a particularly troubling issue because many in the community thought the contents of the MCHW's BEOC kits were being resupplied by the government, not fully recognizing that MCHWs were using the money they received from the family to purchase new supplies. FGDs with women found a wide variety of responses to the question of how much of a fee the MCHWs should receive from the families, but generally agreed that the families should and could pay something.

Finally, the MCHW assessment report found differences in access to services with regard to ethnicity and caste. The majority of the MCHWs are from the Brahmin/Chhetry castes and Nuwakot people are very sensitive about the caste system.<sup>33</sup> In FGDs with non-users of MCHW services the untouchables said that they were not receiving services from their MCHW and that no one was going to the SHPs for services, especially for ANC or PNC when there did not appear to be any problems.<sup>34</sup> This is of concern as these groups are the most isolated and are in need of quality MNC.

### ***Lessons Learned:***

The working relationship between the MCHW and the FCHVs in her VDC and, by extension, the participants in the Mothers Groups is an important factor in expanding access to MNC. The FCHV will often help the pregnant woman plan and prepare for her delivery and accompany her to the MCHW for the delivery. In addition, together the FCHVs and Mothers Group participants provide health education to the women.

Because each MCHW is dealing with a relatively small number of pregnancies and deliveries, her ability to recognize and respond to obstetric emergencies can diminish over time. This is especially true in districts such as Nuwakot, where the number of deliveries MCHWs can train on is relatively limited so they do not get as much hands-on experience dealing with complications either in their training or their practice. These skills need to be regularly reinforced through refresher trainings and supervision that entails review of cases.

In FGDs with mothers, FCHVs and MCHWs, it was suggested that MCHWs should come from the same communities where they practice to limit the distance factor and so they will be familiar with local customs, beliefs and social dynamics as well as be trusted by the community members themselves. While CS-15 had little or no influence on MCHW selection, the partners agreed during the final evaluation that this issue needs to be raised with the government.

---

<sup>32</sup> Final Assessment Report on MNC and OFAC Intervention Program. Page 35.

<sup>33</sup> Final Assessment Report on MNC and OFAC Intervention Program. Page 33.

<sup>34</sup> Final Assessment Report on MNC and OFAC Intervention Program. Page 30.

***Special outcomes, unexpected successes or constraints:***

Flip charts developed by CEDPA for the Birth Preparedness Package (BPP) were reduced by CEDPA in size to about 4 X 5 inches, laminated and put on a Key Chain that could be attached to a belt loop or other part of a woman's garment. These were distributed to FCHVs and pregnant women, for whom they were used to educate on MNC issues, such as danger signs, the importance of ANC/PPC, birth planning, etc. FCHVs were supplied with the flip charts as well to use in the health education sessions to be conducted in the women's groups. They were reportedly a very popular and useful tool for providing health education to pregnant women

As a result of their participation on CS-15, NRCS has become a member of the Safe Motherhood Network at the national level. This is increasing and institutionalizing their skills and capacity to address and advocate on MNC related issues at a broader level.

***Recommendations:***

5. The MOH should consider appointing another MCHW in the VDCs where the existing MCHW cannot meet the health needs of women of reproductive age (due to big geographical areas, long distances, big population, disadvantaged population). In addition, the MOH should consider adding an MCHW at each Health Post in the District, as they currently do not have MCHWs on staff.
6. The MOH should request that the Public Service Commission limit the criteria for hiring MCHWs to women from the same VDC to limit the distance factor and also so they are familiar with and to the communities.
7. The CS-15 Project partners should advocate with the MOH that trained TBAs should be supported and involved in a more formal way within the health care system because TBAs are still attending most of the deliveries in the project area and therefore, need to coordinate closely with the MCHWs and FCHVs in their communities. TBAs can also communicate health education messages and assist in community mobilization. They are recognized, respected by their communities and can assist in community mapping of pregnant women, which helps increase coverage of MNC services by skilled providers.
8. Rewarding or giving incentives to each MCHW for each delivery may be considered at the local government level to encourage and support this important health worker.
9. The data on home based services provided by the MCHWs needs to be recorded and reported on separately by the DHO so more specific and appropriate feedback can be provided.

***iv. Child Spacing (10%)***

CS-15's approaches to increasing child spacing included:

- Increasing access to FP services and supplies,
- Improving the quality of FP counseling, and
- Promoting FP through community-wide BCC.

## **Results:**

**Objective 2:** 80% of SHPs have adequate stocks of essential BEOC and FP supplies, in areas without CS-15 staff.

**Result:** Each of the SHPs throughout the district reportedly had a complete stock of both BEOC and FP supplies in the first quarter of 2003, however, this report did not provide details on the specific types of FP methods.<sup>35</sup>

**Objective 20:** 90% of trained MCHWs and VHWs competent in FP counseling & providing DMPA.

**Result:** The average test scores on FP counseling and providing DMPA for the MCHWs was 92% and for the VHWs it was 91%. This was assessed during regular monitoring and supervisory visits and reported on in the 2003 Annual Report by SC. In addition, the percentage of MCHWs who self reported that they were providing family planning counseling increased from 52% (15/29) at baseline to 89% (32/36) in 2003.<sup>36</sup> Observation of PPC provided by MCHWs in May 2003, found that 96% (14/15) were providing complete FP counseling during their PPC visits. This clearly demonstrates increased knowledge and improved practices in the health workers. In addition, the PLA program found an increase in its participant knowledge on FP from an average pre-test score of 18% to 67% on post-tests; the PHP increased from 21% to 64%; and the Mothers Groups increased from 25% to 63%.<sup>37</sup>

### ***Factors affecting achievement of program objectives:***

While the project appears to have exceeded both its child spacing targets, success on these objectives by themselves do not necessarily translate into increased use of family planning methods. Community and household level data were not available on FP knowledge or practices. So assessing how much of the FP messages were effectively communicated by the BCC program participants and the health workers to the greater community and whether these messages were translated into increased use of effective family planning methods, could not be determined.

During the midterm it was difficult to find members of the Tamang ethnic group who were using family planning, even with the relatively solid coverage throughout the remainder of Nuwakot's population. Anecdotal reports were that by the FE, FP usage in the Tamang was becoming popular, especially in those areas that relied most heavily on project-trained local leaders and community members to communicate FP messages.

### ***Special outcomes, unexpected successes or constraints:***

The FCHVs provide condoms and resupply pills and refer women for other methods. Depo is the most popular family planning method. SC tested whether the VHWs can provide the counseling and first dose of Depo in another Siraha district in Nepal. They developed and tested the curriculum. Based on the initial success, this approach was adopted in Nuwakot District. Now it is being refined and prepared for endorsement by MOH as a national curriculum.

---

<sup>35</sup> The NRCS District Quarterly Report (January – March 2003) noted that

<sup>36</sup> Final Assessment Report on MNC and OFAC Intervention Program. Page 18.

<sup>37</sup> BCC Four-Year Achievement Report FY 1999-2003. Page 5.

### **c. New Tools/Approaches, Operational Research and Special Studies**

#### ***Tools:***

- The key chain with MNC messages, described above.
- The BCC intervention used learner-generated education materials (see BCC section) and developed a self-assessment tool to assess their progress. This helped enhance the involvement of the participants as the experience more directly mirrored their own interests.
- The project used Participatory Rapid Appraisal tools to design and test BCC strategies and messages.
- SC developed a booklet containing maternal and neonatal health messages that was distributed to all of the BCC participants.

#### ***Operational Research:***

The CS-15 project implemented two operational research studies designed to respond to the following questions:

- “Is the sale of Cotrimoxazole by FCHVs for treatment of childhood pneumonia an effective method for recovering costs of antibiotics without discouraging care seeking or placing a substantial burden on FCHVs?”
- “Can the quality, availability, and utilization of Maternal and Newborn Care (MNC) and Obstetric First Aid Care (OFAC) be improved in the hills of Nepal by training and supporting MCHWs to provide these services?”

#### ***Special Studies:***

The project used an organizational capacity assessment at the baseline and again during the final evaluation to identify administrative, programmatic, governance, and other needs within SC, NRCS and the DHO. “Enhancing Organizational Performance: A Toolbox for Self-Assessment,” by Charles Lusthaus, et. al. was used to develop the questionnaires and analyze the results. The results were then used to inform a capacity building plan for CS-15 and assess the results during the final evaluation. (See Attachment G for final results.)

### **d. Cross-Cutting Approaches**

#### **i. Communication for Behavior Change**

**Overview:** The CS-15 behavior change communication (BCC) strategies were the primary means for communicating project health education messages to the broader population. They were:

*Participatory Learning and Action (PLA)* was a six-month, six day per week course for illiterate women between the ages of 18 and 45. The focus of PLA was on developing their literacy and communication, building on their creativity in the context of the local culture. A participatory learning and action approach was used where the participants were actively involved with social mapping, developing their own action plan, and defining the content of and developing the training materials for their course covering

both literacy and the project's health education messages. A total of 6,566 women participated in PLA, with 75% (4,921/6,566) completing.

*Parenting Health Program (PHP)* was a three-month, six days per week course for women of reproductive age from the project communities that did not participate in PLA. Based on an Early Childhood Development curriculum, it focused on educating the participants in the project's health education messages for each of the four CS-15 intervention areas so they could carry these messages back to their communities. A total of 4,600 women participated in the course and 85% (3,926/4,600) successfully completed.

*Mothers Group Health Program (MGHP)* was developed and mandated by the MOH whereby the participants receive training in health. Each group is made up of 15-25 participants, registered with the DHO and facilitated by an FCHV. Each group covers the course content in a series of bimonthly two-hour sessions that last for one year. A total of 10,426 participants were involved in the CS-15 Mothers Groups at the beginning of the program and at the conclusion there were 9,520. Altogether, 12,279 mothers completed the program.<sup>38</sup>

*Bridging the Gap* was initiated in July 2003 for the PLA and PHP graduates and the MGHP participants. It focuses on the birth preparation package (BPP) and has involved 2,660 women.

*Street Dramas* is a small grant program where local NGOs were invited to submit proposals to provide dramas on the project's health education messages. Four NGOs were funded in each of years two and three, and presented their dramas to an estimated 16,000 audience members at 80 presentations.

While these BCC strategies were all cross-cutting, supporting each of the project's CS interventions, the overall BCC function was designed as a separate, distinct component from the rest of the project, to be implemented by NRCS with its own community structures, reporting system, staffing (except for the FCHVs who facilitate the MGHPs), and training plan and materials.

### ***Effectiveness of the BCC Strategies:***

The use of pre/post-tests in each of the BCC components found substantial increases in participant knowledge levels. The PLAs increased their average test scores on the CS interventions from 22% at the pre-test to 70% at the post-test and 94% (4,626/4,921) of the graduates subsequently passed the government's literacy test. The PHP participants increased their scores by a comparable margin from 23% to 71% and the MGHP participants increased their scores from 27% to 66%.

The project did not have the means at its disposal to measure the extent to which the messages learned by the BCC participants were being successfully conveyed to the community. However, the total number of participants in each of the components was large enough, when compared to the estimated population of MWRA, that it can be assumed that these messages were having a

---

<sup>38</sup> BCC Program: Four-Year Achievement Report (FY 1999-2003). Pages 12-21. CS-15 Nepal Final Evaluation. Save the Children, December 2003.

broad impact at the community level. This is further supported by the overall increase in appropriate health seeking behaviors experienced in the CS interventions.

BCC interventions were very effective and popular in some communities because they were based on local views, vision and values. They provided local women with the knowledge and skills to better assess health situations and to seek local solutions to their health-related problems. Since the thrust of CS-15 was to improve children's health by raising people's service seeking behaviors, the BCC interventions proved instrumental in increasing participation of the disadvantaged communities, including the Tamang. The participation of Tamang, Gurung and Magars in PLA programs, for example, reached 66% during the 2000/2001 to 2002/03. The participation of dalits ('untouchables'), however, was only 11%.

### ***Achievement of the BCC Objective:***

**Objective 5:** BCC Officer & all BCC Supervisors demonstrate competency in training NFE & PE facilitators.

**Result:** All eight BCC Officers and Supervisors attended training on PLA Program and Parenting Program Master Level TOT.

- Their knowledge scores improved from an average score of 9% in the pre-test to an average score of 86% at post-test.
- The average score they received for Teaching Methodology was 96%.
- The average score they achieved during observation of their facilitation skills was 97%.

### ***Lessons Learned:***

- Use of FCHVs to help organize and facilitate the Mother's Groups has been effective. However, they will need on-going support and supervision to ensure their continued effectiveness in this role.
- Health education messages about PCM, CDD, MNC and RH services are more effectively presented through female facilitators than male. However, more rigorous and effective strategies need to be developed to target males as well because they are the traditional decision makers in the family and community.
- Health education messages are more effectively delivered when incorporated into popular entertainment, such as the street dramas.
- Respected local people can be the most effective promoters for behavior change. For instance, traditional healers were reportedly helpful in supporting CS-15 program behavior change strategies (e.g., referral of pneumonia and very severe cases to skilled providers, reducing the use of dangerous traditional practices and promoting modern family planning methods.)
- NRCS staff noted that the project found it necessary to segregate some of the BCC trainees by caste and ethnicity to ensure that individuals were comfortable. Otherwise, the dropout rates increased.

### ***Sustaining Behaviors Beyond CS-15:***

The BCC strategies were implemented primarily by the NRCS and as planned, their role in administering these activities will conclude with the end of CS-15. Therefore, the PHP, PLA, Bridging the Gap, and Street Dramas will cease. Since the existence of the MGHPs is mandated by government policy and they are facilitated by FCHVs who will continue to function within the health care system, the mothers' groups should continue. The MGHPs were very popular in the communities, however, this was not always the case. Prior to the start of the project many of the MGHPs had gone dormant or ceased to exist. To ensure their continued vitality, it is important that the FCHVs be supported by both the DHO and the community. The joint supervision of the FCHVs done during CS-15 by the DHO and NRCS as well as the increased community awareness of the roles of the FCHVs should help here. In addition, at the community level many of the older FCHVs are being assisted by friends and younger family members who have committed to taking on these responsibilities when the FCHV 'retires.'

An opportunity to possibly continue some or all of the other BCC strategies was not pursued. The DHO has a health education unit, which could have participated in developing, implementing and monitoring the BCC strategies along with NRCS, and later undertaken responsibility for continuing them beyond CS-15. At a minimum, the health education unit could have benefited from the experience of participating more directly with NRCS and strengthening their skills in these areas. Most of the coordination between NRCS and the DHO, especially after the beginning of the project, was happening at the facility level where they were focused primarily on the day-to-day management of program activities. The more senior levels of the DHO did not feel they were as closely involved with this aspect of the project because it fell under NRCS's role. Now the NRCS staff, the DHO, and the BCC program participants have expressed interest in continuing the PHP and PLA activities which, if the security situation allows and relatively modest funding could be found, would be an excellent way to help ensure that what has been learned over the last four years can be transferred to and institutionalized within the DHO.

### ***Recommendations:***

10. A brief workshop should be provided by the NRCS BCC staff to the DHO Health Education Unit staff to transfer as much of the project's BCC experiences, methods and materials as possible.
11. Health facility staff (in addition to MCHWs and VHWs) need to be trained and supported by the DHO to provide supervision and guidance to the FCHVs in their facilitation of the mothers groups to ensure that they continue.
12. To build literacy in both the mothers and the FCHVs, literacy training (PLA) inputs from the project's BCC strategies should be integrated into regular DHO services, including materials, supervision, and training provided through the DHO. This needs to be coordinated directly with the District Education Office and also the National Health Education Information and Communication Center.

## *ii. Capacity Building*

### *1. Strengthening SC*

Save the Children's Nepal CS-15 project tested an approach to capacity building of local MOH workers and MOH-supported volunteers that entailed reliance to a great extent on its national NGO partner, the Nepal Red Cross Society. This was not, however, part of the original plan in SC's application to USAID. In fact, NRCS was not included in the application. The primary reasons for adding NRCS were due the NFO's recognition of the deteriorating security situation in rural Nepal and its decision to limit staff access to these areas. As a result, NRCS was called upon to implement much of the capacity building activities and assist the DHO in the provision of direct services at the health facility and community levels. SC's role was that of mentor, change agent, trainer, and advisor, while maintaining final responsibility for project results and financial administration.

This type of partnership represented a new approach to Child Survival for SC. Overall, the FE Team found that it was generally successful in the context of Nuwakot and identified several lessons learned from the experience that will hopefully be useful by each of the three partners and others that are included later in this section. Both the DHO and NRCS have developed experience in working together and in partnership with an international NGO, developing skills in joint planning, monitoring, administration, and problem solving. SC has developed experience in working closely with national level NGOs and supporting them in an expansive role within its projects, an approach that could very well be useful in other insecure or unstable locations.

An Organizational Capacity Assessment was implemented with each of the three CS-15 Partners at baseline and as part of the FE that entailed interviews with the staff of each of the partner organizations. (NOTE: Because of the lack of FE Team access to Nuwakot, the FE results were based primarily upon verbal reports and could not be verified by first hand observation.) These results were analyzed and compared to the baseline. (See Attachment G.)

For SC/Nepal, three staff were interviewed, including two from the HFO/Nepal and the SC Coordinator from the field. They reported the following changes in their capacity:

- Experience in the design, administration and use of operational research studies has increased.
- The capacity to backstop field projects, especially during times of political instability and conflict, has been strengthened.
- A stronger relationship with NRCS has been developed and as a result, the staff have gained useful experience in supporting a local NGO with responsibilities in both capacity building and supporting direct services.
- Program design capacity has been increased as a result of the staff's involvement in preparing concept papers and proposals.
- Information management and reporting skills have increased.
- Staff developed experience in the BASICS-designed Health Facility Assessment tool.

## **2. Capacity Building of Nepal Red Cross Society (NRCS):**

While CS-15 organizational capacity building activities were primarily centered on improving and expanding the services of the DHO, NRCS also received significant support in this area, even though their project-related involvement was limited to the length of the CS-15 project.

### ***Results:***

**Objective 4:** 80% of NRCS SNs and ANMs demonstrate competency in CBAC training of FCHVs.

**Result:** Of NRCS staff, seven ANMs and seven SNs were trained to be TOTs for FCHVs on CBAC. Observation of the 14 NRCS staff was done during the training they provided to FCHVs. It was found that two required additional training and support. This was provided and under subsequent observation it was found that all fourteen were competent in providing the CBAC training to FCHVs.<sup>39</sup> Even more importantly in terms of establishment of an on-going training capacity within the district, four DHO staff received eleven days of training to be master trainers on CB-IMCI.

**Objective 5:** BCC Officer & all BCC Supervisors demonstrate competency in training NFE & PE facilitators

**Result:** All eight BCC Officers and Supervisors attended training on PLA Program and Parenting Program Master Level TOT.

- Their knowledge improved from a mean score of 9% in the pre-test to 86% at the post-test.
- The average final score received for Teaching Methodology was 96%.
- The average score received during observation of facilitation skills was 97%.

In addition, NRCS staff and volunteers received training in the following areas as part of their participation in the CS-15 project:

- Each of the project's CS technical interventions, TOT, counseling, HMIS, LMIS and nutrition.
- Leadership and management for nine of the 13 Executive Committee Members so they were better equipped to oversee project activities and finances.
- Proposal writing for 13 NRCS volunteers.
- Orientation on CS-15 provided to all 30,000 NRCS members, VDC members and teachers in Nuwakot District.
- Financial management for the accountant.
- Attendance at a workshop on project phase-out by the Secretary and the President of the Nuwakot Chapter.
- Use of HMIS guidelines provided by the DHO to NRCS staff.

The following systems were established and equipment purchased for NRCS as found through the Organizational Capacity Assessment:

---

<sup>39</sup> March 2002 CB-IMCI Followup Report  
CS-15 Nepal Final Evaluation. Save the Children, December 2003.

- Built a training hall for the project with SC matching funds.
- Purchased two motorbikes, personal computers, photocopier, large video screen, and an overhead projector.
- Helped establish NRCS accounting system, upgrading it from a manual system to the SUN system used by SC.
- Helped establish email system and added a telephone line.

In sum it is clear that NRCS increased the administrative and technical capabilities of its staff and volunteers as well as its physical infrastructure in Nuwakot District, which if utilized can have a positive impact on NRCS and the people it serves at the district and national levels. However, the majority of its staff will be moving on at the conclusion of CS-15 unless other funding can be secured. Since many of their staff are from outside Nuwakot, then it is assumed that they will probably leave the district. This dispersion of capacity developed within NRCS is unfortunate for the district as significant project resources were invested to orient and train this staff.

### **3. Capacity Building of the DHO and MOH Workers**

#### ***Results:***

***Objective 1:*** 80% of trained FCHVs have adequate stocks of cotrim., after CS-15 staff depart the area.

***Result:*** During supervisory visits, it was found that 91% (118/130) of FCHVs in the Phase I communities had a stock of 20+ tablets of Cotrimoxazole two years after the departure of CS-15 staff.<sup>40</sup> Each FCHV was provided with 200 tablets upon graduation from the training and was visited annually using a performance checklist that measures their current supply levels. After using up their initial stock, the FCHVs are responsible for replenishing their supply using the money they collect from sales.

Most of the FCHVs interviewed in the Cotrim assessment reported being able to purchase and replenish their supplies from local health facilities. This has been facilitated by the JICA-supported Community Drug Program (CDP), which was established in 51% (31/61) of Nuwakot's VDCs. Most of the FCHVs who did not have easy access to a health facility with a consistent supply, were being supplied by their VHW or as a last resort going to a commercial pharmacy.

***Objective 2:*** 80% of SHPs have adequate stocks of essential BEOC and FP supplies, in areas without CS-15 staff.

***Result:*** Regarding BEOC supplies, 91% of MCHWs (32/35 sampled across the entire district) had BEOC Kits complete with equipment and 44% were complete with supplies, 44% were mostly complete, and 12% were less than half complete.<sup>41</sup> The rates are high enough across the entire project area that it can be safely assumed that the target was achieved in the Phase I communities after the project staff departed.

---

<sup>40</sup> April-June 2003 Quarterly CB-IMCI Supervision and Followup of FCHV/MCHW/VHW Report

<sup>41</sup> Final Assessment Report on MNC and OFAC Intervention Program.

CS-15 Nepal Final Evaluation. Save the Children, December 2003.

**Objective 3:** 80% of facilities submit logistics management reports correctly and on time, in areas without CS-15 staff.

**Result:** In 2003, the DHO reported that 65% of SHPs were submitting their reports to the HPs correctly and on time, and all of the HPs were submitting their reports to the DHO on time. These reports are reviewed quarterly together by the program partners. While this does not attain the target of 80%, it represents a significant improvement over what was found during the baseline health facility assessment – about 30%. One possible reason for not having reached the target was the growing insurgency in the district, which has hampered travel and therefore diminished supervision and data collection.

Multiple strategies were used to increase the capacity of the DHO, including training (discussed later), joint supervision, and placing NRCS ANMs and SNs at health facilities to work in tandem with MOH health workers.

### ***Results from the Organizational Capacity Assessment:***

A comparison of the baseline and FE Organizational Capacity Assessment results for the DHO found the following:

- Meetings with HP and SHP staff were happening more regularly.
- Monthly MHGP meetings facilitated by the FCHVs were being held and attended more regularly than before the start of the project.
- The DHO began to attend cross-sector meetings at the district level with the DOE, LDO and other agencies.
- DHO staff were attending regular VDC meetings more frequently except when the security situation did not permit it.
- Staff evaluations were increasingly being based on data collected during joint supervisory visits.
- The DHO attended a workshop in the US on CB-IMCI.
- DHO staff participated in all of the CS-15 operations research studies, baseline planning and evaluation activities.
- The DHO trained its staff on the revised HMIS.
- The DHO is preparing annual reports using current records and indicators. During CS-15 data was also being collected from NRCS to monitor progress on the CS-15 indicators.
- Checklists and exit interviews have started to be used, however, only sparingly due to budget restrictions on printing.
- The DHO began preparing monthly action plans, which have been occasionally shared with the CS-15 partners.
- DHO staff have been exposed to NRCS BCC activities to some extent.
- 106 BEOC kits were distributed to MCHWs and SHPs.
- ORT corners were established in each of the MOH facilities in Nuwakot District.
- Nuwakot has been recognized by the Government of Nepal as a CB-IMCI District as a result of the project.

Several next steps were identified by the DHO during the final evaluation:

- The DHO filing system still needs to be made more systematic and more of the data needs to be computerized.
- The DHO needs assistance in documenting its achievements, opportunities and problems.
- The DHO's Master Trainers need to be trained on the project's BCC strategies.
- The DHO's HMIS staff need computer training on EXCEL and WORD.
- The DHO's computer equipment needs to be upgraded.
- The DHO lacks equipment necessary to promote BCC, such as videos, VCRs, etc.

The primary capacity building strategy at the health facility level was initially to place a three-person NRCS team, including one Auxiliary Nurse Midwife (ANM), one Staff Nurse (SN), and one Behavior Change Communication (BCC) Supervisor at three Ilaka-level health facilities in Phase I. Their role was to:

- Plan, monitor and implement all Ilaka level CS-15 activities
- Supervise MCHWs and in so doing, enhance the supervisory skills of the health facility staff
- Conduct trainings for the FCHVs, MCHWs and VHWs.
- Coordinate and support the MOH staff at the HPs and SHPs.

One of the lessons learned from the Phase I experience was that SN/ANM/BCC Supervisor access to the community was too limited and so they were moved to the SHP/HP level in Phase II, where they would be closer to the MCHWs and FCHVs.

At the community level, the project strengthened the capacity of the MCHWs and FCHVs, primarily through training and joint supervision. Unfortunately, due to the security concerns, the FE Team only had contact with MCHWs and FCHVs through two Focus Group Discussions held by senior project staff who reported back to the FE Team. The following was learned:

- The project trainings increased the confidence of the MCHWs, so they were more comfortable and confident assisting with deliveries outside the health facilities.
- Several of the project trained FCHVs have partnered with their community to set up funds to be used to support their services
- Being able to provide quality ANC services, educate clients on birth planning, and successfully estimate the delivery date has helped the MCHWs gain credibility with their clients and others.
- The vast majority of the deliveries are still being assisted by untrained individuals/TTBAs and the MCHWs are being called in when complications arise.
- The FCHVs and the MCHWs have started working together more effectively than before.

“When community people bring the sick children and mothers carrying their babies to me in baskets I feel happy. They have taken me as their village doctor. Sometimes I feel sad when they label me as paid staff of the government and don't know that I'm working without any benefit.”

*From a Focus Group Discussion with a Female  
Community Health Volunteer. August 2003*

- Some of the FCHVs said that they are only able to do their work with the help and approval of their family. The community has also been supportive by helping to mobilize itself for meetings, sharing the health education messages, and “admiring their services.”

The potential for both the FCHVs and the MCHWs to continue their work is very strong as both were already important parts of the Nepal health care system prior to the start of CS-15. Even though the FCHVs are volunteers who work without pay, they clearly receive other rewards for their services. In traditional Nepal society most women have few options beyond farming and being a housewife. This is especially true in rural areas for those from the lower social castes and the ethnic minorities. Becoming a FCHV is one way for a woman to elevate her position. Even though the FCHVs are not paid, they receive training, supervision and most importantly, increased respect from their families and the community. Several FCHVs said in the Final Evaluation that they were increasingly recognized as a “pneumonia doctor” in their community as a direct result of their new skills and ability to provide medicine to treat pneumonia.

“In Nepal, the FCHVs do not wait around for training. They get to work right away and they don’t quit.”

*From an interview with John Quinley, MD, MPH, ScD, Health and Child Survival Advisor, USAID/Nepal, September 4, 2003*

Further information can be found on FCHVs and MCHWs, respectively, in the reports, “Final Assessment Report of Selected Mothers/Caregivers and FCHVs in Management of Under-Five Children with Pneumonia and Diarrhea at Home,” by Nandika Devi Shakya in Attachment E and “Final Assessment Report on MNC and OFAC Intervention Program,” by Narbada Thapa in Attachment F.

### ***Lessons Learned on Capacity Building:***

The project strategy of posting NRCS SNs and ANMs to work alongside DHO staff was an effective mechanism for building and solidifying health worker skills developed during the project trainings.

Cross-district sensitization visits, where staff and volunteers visit other sites within and outside the program, were a popular and effective training method and incentive for trainees.

Hiring staff from outside the district for positions within NRCS and the DHO means that orientation takes longer and the turnover rate tends to be higher. Staff hired from outside the district also tend to view their job as a short term ‘stepping stone’ assignment rather than a more permanent job.

The project has increased the community’s understanding of the roles of the FCHVs, MCHWs and VHWs. This has increased the demand for higher quality services.

### ***Recommendations for Capacity Building:***

13. A followup assessment should be done by MOH staff on each health worker at the health facility s/he works at 4-6 weeks after their training to: 1) reinforce their new skills; 2) identify factors that might be limiting their effectiveness; and 3) make any necessary changes or improvements to the training strategies.

14. Save the Children should continue to seek out opportunities to further strengthen the capacity of the NRCS and DHO by sending key staff to national and international workshops and seminars, and through involving them in other child survival-related activities in Nepal and elsewhere.

#### **4. Training**

A multi-tiered approach to training was used to serve the dual purposes of: 1) building the skills of the project staff and volunteers, and 2) establishing an on-going training function within the DHO. Trainees included community members (VDC members and traditional healers), NRCS staff and volunteers (board members, district staff, SNs, ANMs, the administrative staff and the membership), DHO staff and volunteers (FCHVs, MCHWs, VHWs, health facility workers and district level staff), and SC staff in Nuwakot and Kathmandu.

The project received support from the District Education Office in Nuwakot on the adaptation and development of training plans and materials for the BCC strategies, and from the National Health Training Center of the MOH on the content and plans for the training on the CS intervention topics. Pre- and post-test were used during most of the trainings to assess immediate changes in knowledge levels. Then supervisory visits were used to assess the long-term retention on the new skills.

Overall the effectiveness of the training strategy with regard to building the skills of the project staff and volunteers was proven very effective as evidenced in the increased knowledge level of the trainees, the vast majority of whom scored within the 80% to 100% range on post-tests. With regard to the second purpose, the DHO has developed a core group of four of its staff who have been trained as master trainers and are able to organize and administer training programs for DHO staff and volunteers on each of the project's CS interventions.

#### ***Lessons Learned:***

Training alone is not enough to ensure that newly developed healthcare provider skills and practices are sustained. Refresher trainings and supervision provided by staff, who are also trained and experienced on the topics, is necessary. This is especially true with BEOC, as it can be several months between the training and the time a MCHW will confront a delivery requiring BEOC skills.

During their training the MCHWs maintained daily diaries, which were regularly reviewed and monitored by the trainers. This was an excellent way to demonstrate the importance of good record keeping to the MCHWs in a tangible way and to track and improve the quality of their work overall.

The In-Charges, especially at the smaller MOH facilities, need to be trained in the same skills as the staff they oversee so they can provide more effective supervision and can help out when the MCHW is not available.

### ***Sustaining Training Activities:***

The key to sustaining the project training activities is the on-going support, both technical and financial, of the master trainers in the DHO. The DHO's relationship with the National Health Training Center needs to be maintained and nurtured as they can continue to provide technical assistance in terms of the content and the training methods. The financial support necessary for on-going training is more difficult to access. Currently, over one hundred new FCHVs still need to be trained and the turnover and on-going need for refresher training needs to be a high priority within the MOH and the DHO's budgets.

### ***iii. Sustainability Strategy***

#### ***Overview:***

The project was designed to build the capacity of systems, staff and volunteers that already existed within the health care system, at least on paper, rather than establishing new ones. Except for some of the BCC strategies (PLA, PHP, Street Dramas and Bridging the Gap), all project activities and strategies are planned to continue beyond CS-15. The project used an innovative two-phased strategy to test the sustainability of project activities. Project inputs were only provided in the eastern half of the district for the first two years (Phase I) and then the project staff exited, leaving the DHO to implement the project activities on its own. During Phase II project staff returned at random points in time to assess which project-related activities were continuing and the levels of quality and coverage. CS-15's two sustainability objectives and three of the five capacity building objectives were designed to measure this progress, specifically comparing targets achieved at the end of Phase I with two years after the departure of project staff as a measure of what could reasonably be expected to continue beyond CS-15. The overall results, both below and on the first three capacity building objectives, were very promising.

***Objective 6:*** The number of episodes of pneumonia treated per child per year through FCHVs remains stable after CS-15 staff depart.

***Result:*** In the Phase I communities 0.09 pneumonia episodes were treated per child per year by FCHVs in 2001. In 2003, two years after the CS-15 staff departed, this rate was 0.08. Even with this slight decline nearly half of the estimated pneumonia cases were being responded to by FCHVs, which represents a significant achievement by the project.

***Objective 7:*** The number of MCHW contacts for antenatal care, deliveries, and postpartum care remains stable, after CS-15 staff depart.

***Result:*** In the Phase I communities,

- Antenatal Care: Increased from 2.8 sessions provided per MCHW per month in 2001 to 8.56 in 2003.
- Deliveries by skilled health providers increased from 0.5 in 2001 to 1.24 in 2003.
- Postpartum Care increased from 0.6 in 2001 to 2.0 in 2003.

This represents a remarkable achievement, which is probably due to both expanded coverage and improved record keeping and reporting by the MCHWs.

Both the DHO and NRCS are Nepali institutions and SC has a long-term commitment to the country. In addition, both of the consultants who did the two field assessments for this evaluation are Nepali. This provides an opportunity to assess the sustainability of CS-15 two to four years into the future by implementing the same two assessments between 2005 and 2007.<sup>42</sup> The results would be useful to the partner organizations as well as the broader development community in Nepal and the members of the CORE Group.

### ***Phase-Over Plan:***

The CS-15 partners met in 2002 to develop an initial Phase-Over Plan, which was incorporated into the Third Annual Report. While this was a good start, the draft lacked sufficient detail for the partners to clearly understand their roles, responsibilities, and the specific steps to be taken in the remainder of CS-15 and beyond. Subsequently, several actions were taken to ensure a smooth transition (scaling back staff, transferring responsibilities to the DHO, etc.), however, they were not tied to a detailed written plan. On September 27, 2003 eighteen participants from each of the three partner organizations met and drafted out a more detailed Phase-Over Plan, which identified responsibilities for each of the partners and has spelled out specific commitments for each organization. This is a solid draft, however, some additional questions still need to be addressed:

- How are the BCC skills and experiences going to be transferred from the NRCS BCC staff to the DHO, particularly the Health Education Unit?
- Are there specific tasks that need to happen to close out the PHP, PLA and Bridging the Gap activities, assuming that they are not going to continue?
- How are the NRCS staff ANM/SN responsibilities being transitioned over to the DHO health facility staff?

Ideally, this plan should be informed by the experiences and lessons learned from the project's departure from the Phase I communities in 2001.

In the phase out plan each of the partners have committed to the following beyond CS-15:

#### **SC:**

- Providing TA to the DHO as needed.
- Participating in joint coordination meetings as invited by the DHO and/or NRCS.
- Coordination, followup and advocacy with the Child Health Division and Family Health Division of the MOH for continuation of project activities.
- Implementation of a followup assessment as noted above.

#### **NRCS:**

- Organize annual coordination meetings with the DHO and SC.
- Provide inputs and support to the DHO as it prepares for its annual review meeting with the national MOH.
- Incorporate CS-15 health messages in all NRCS activities and its safe motherhood network program.

---

<sup>42</sup> A similar assessment was done by Minnesota International Health Volunteers in 1993 – five years after the conclusion of their first CS project in Uganda. The findings were positive overall and the results shared with the Child Survival PVO community, the Government of Uganda, and donors.  
CS-15 Nepal Final Evaluation. Save the Children, December 2003.

## DHO

- Participate in the above listed activities.
- Administer the project's CB-IMCI, MNC and Family Planning components.

SC currently has plans to continue to work in Nuwakot, which should facilitate continued contact with and support of the other partners. SC currently has plans to continue to work with the DHO, the DEO and NRCS in Nuwakot on a school health and nutrition program. This is in addition to SC's other programs in the district – Early Childhood Development, Primary School Education, and adolescent life skills development. The future of these efforts, and SC and the partners' involvement in Nuwakot, is going to be determined in part based on the security situation, which remains very troubling. If the security situation allows it, it would be useful for the partners to pursue additional program opportunities together in Nuwakot and beyond.

### ***Financial Sustainability:***

CS-15 does not require the DHO to incur any additional responsibilities beyond its current mandate and therefore the financial requirements for sustaining CS-15 improvements are relatively minor, limited primarily to stepped up supervision and expanded training. The DHO already has a budget for these activities. The main financial challenge is more for the FCHVs for cotrim sales and the MCHW for maintaining their BEOC supplies. Both the FCHVs and the MCHWs expressed confidence in their ability to replenish their supplies with community support. The NRCS has identified some cost recovery strategies that it will use to maintain a limited administrative and support function in Nuwakot through its ambulance service and renting space in its buildings.

### ***Demand for Services:***

CS-15 has effectively used its extensive training component, BCC strategies and support of FCHVs and MCHWs to increase the community's demand for services. Throughout the FGDs, mothers and other community members said they had a better understanding of the health issues covered by the project and the roles of the FCHVs/MCHWs, and therefore, greater confidence in recognizing and requesting higher quality health care. The challenge is going to be on the MOH, especially the 53 MCHWs, to be able to meet this demand.

### ***Recommendations for Sustainability:***

15. The CS-15 Phase-Over Plan needs to be further developed and implemented by the CS-15 partners.
16. SC in conjunction with the other CS-15 Partners should implement the same two assessments (both the FCHV/Cotrim Sale and MCHW Assessments) two to four years after CS-15 to assess the state of the project activities. Ideally, this should involve the same Nepalese participants who participated and contributed to this Final Evaluation.
17. SC and NRCS should explore other donor resources so they can remain involved with and support Nuwakot beyond CS-15, especially in the Phase II communities, which had less contact with the CS-15 project.

18. Early Childhood Development (ECD), School Feeding/Mass De-Worming and other programs that are being implemented in Nuwakot District should be considered by the CS-15 Project Partners as vehicles for continuing to provide the project's health education messages.

### **3. Program Management**

#### **a. Planning**

Each of the program partners noted that they had participated directly in the design of the program, writing the proposal, developing the DIP, and implementing the midterm and final evaluations. Early on in the program, all three partners met regularly at the district coordinator level, however, once the project was fully underway and the NRCS staff were posted at the health facilities, then the district level coordinator meetings became less frequent and irregular. This led to some tensions between the DHO and NRCS, probably limiting the potential for strengthening the DHO, especially in the project's BCC strategies.

As a roadmap for program implementation the DIP was considered to be a thorough and useful tool in CS-15. However, based on the CS-15 experience of forming a tripartite partnership between an international NGO, a national NGO and a district health agency, there was one area that USAID might want to raise in future DIP Guidelines based on the experience here. For several years USAID has required CS applicants to partner with one or more local organizations or agencies. It is important to recognize that each partner brings its own culture, history, governance structures, and rules of operation to a relationship, which can impact the partnership and ultimately, the project. While memoranda of understanding and the DIP guidelines provide some guidance, there is very little direction provided on how to structure a partnership between organizations, what are standard/practical rules of order or bylaws for running a partnership (i.e., What constitutes a quorum so decisions can be ratified? Who chairs partner meetings? Are partner meetings open to the public? How frequently do the partners need to meet? How should grievances/disagreements between the organizations be addressed? Coordinating employee policies/pay-scales/benefit packages). While some organizations cover these issues in their MOUs, it would be helpful for PVOs to have some direction on how to establish partner relationships.

#### ***Recommendation:***

19. The objective of the Child Survival and Health Grants Program is to "support U.S.-based PVOs and their local partners to carry out effective, quality child and maternal health and nutrition, family planning, HIV/AIDS and infectious disease programs..." Since working with local partners is such an important aspect of this program, USAID should incorporate questions on establishing partnerships into the DIP guidelines and considering adding a chapter on this topic into the Technical Reference Materials.

#### **b. Staff Training**

SC provides numerous training opportunities for its staff, including the annual PLG meetings for its health staff in the U.S. and in Nepal, visits to other project sites, and sending staff to conferences and workshops on program-related topics. Save the Children's CS-15 staff visited

two other project sites in Nepal (once to participate on a CS evaluation for CARE/Nepal), attended conferences on BCC, program design, monitoring and evaluation, and attended each of the annual PLGs. This level of training for SC staff was found to be adequate as each of the senior staff already had several years of experience working on CS programs. SC also sponsored the DHO to attend a conference on CB-IMCI in the US near the beginning of the project. (Further discussion on training of partner staff is provided in the Capacity Building section above.)

#### ***c. Supervision of Program Staff***

Due to the lack of access to the program site, resulting from the security situation, the FE Team was not able to assess the adequacy or the institutionalization of the supervisory systems within the partner organizations. The MCHWs, FCHVs and health facility staff said in FGDs that the joint supervision carried out by NRCS/DHO, using project adapted/developed checklists, was one of the positive aspects of the project and should be continued. The senior project staff noted that these visits sometimes had to be delayed or cancelled due to security concerns and muddy roads during the rainy seasons. One difficulty noted by the DHO was the fact that NRCS SNs/ANMs were supervised by the NRCS rather than the DHO, so they had little incentive to get out to the field to support and assist the FCHVs and MCHWs. In Phase II, it was decided to move the NRCS health facility staff from the Ilaka level out to the SHPs only, where they would be closer to the community. The DHO also suggested that the three coordinators of the three organizations should meet monthly to jointly develop workplans for the health facility staff, but this did not happen consistently.

#### ***d. Human Resources and Management***

As well established, long-term institutions within Nepal, each of the three CS-15 partners has essential personnel policies and procedures in place that are more than sufficient to ensure continued operations. One challenge during CS-15 was the fact that each organization has its own distinct rules and procedures for recruiting and hiring staff. The DHO is required to use an entirely different government agency to hire. This has meant that staff have been hired from outside the district, which means more time is required for orientation and the turnover rate tends to increase. In addition, when the NRCS was hiring staff at the start of the program they were pressured by some community members and also had difficulties finding qualified candidates in the district. In response they established a selection committee including program staff and community representatives. The NRCS has also attempted to hire individuals from the ethnic minorities and untouchable castes, but has only been able to hire two Tamang ANMs because of the lack of qualified individuals.

Again, because of the lack of access to the project site, assessing the overall morale, cohesion and working relationships among the staffs of the partnering organizations was not possible. Understandably, however, one of the main frustrations voiced by each of the three organizations was the level of staff turnover. The pool of qualified candidates in Nuwakot is very limited. Turnover within the DHO was primarily due to transfers, especially at the Ilaka level and lower. Many individuals new to the Ministry of Health consider working in Nuwakot an entry-level post, which they will leave once offered a better paying job or a higher position. Virtually all the staff at this level are new to the project at the time of the FE. For NRCS, only one of the seven BCC Supervisors is new, because they were men from the local area. Conversely, only one in

seven of the SNs and two in seven of the ANMs have been with the project since the beginning. The reason for this turnover is they were recruited from outside the project area and did not want to stay in Nuwakot for the long term. NRCS is on its third Coordinator in three years, the most recent had four years of project experience and remained with the project through its conclusion. Clearly, these turnovers have created a challenge for the project, complicating coordination and delaying project activities while new employees had to be recruited, oriented to the project, and acclimated to the communities. There was only one change in the SC senior staff, when the CS Coordinator decided to return to school to complete a degree program. His replacement had been with the project for several years, where he had been responsible for Monitoring and Evaluation. All of the other staff were with the project since the start of Save the Children's first CS project in Nuwakot in 1992.

Senior staff in both NRCS and SC have already been having informal discussions to identify new jobs for the program staff and several transfers have already been made. There will be no staffing changes within the DHO as they will be continuing all of the CS-15 project activities and services as part of their regular jobs.

e. **Financial Management**

A majority of the CS-15 funding went to NRCS to cover the costs of the BCC activities and the capacity building and training of the MOH staff and volunteers. To help establish the systems and skills necessary to properly manage these funds, SC provided TA, training for the accountant in the SUN system, and a computer with software so they could upgrade from a manual to computerized accounting system. Three annual audits were done throughout the project, including internal audits by NRCS and SC, as well as external audits arranged by SC. No changes were required to the budget during CS-15. The DHO, since it was focused on its regular, mandated services functioned entirely on its government budget without receiving any direct funding from CS-15. The DHO will be using the same financial systems and budgetary skills that it already has in place for the continued management of CS-15 program activities and services.

Additional financial resources will probably be needed at the DHO level to help cover the added costs of more extensive supervision and regular training and refresher training, which the DHO has stated will be made available. At the community level, the only on-going costs are associated with the sale of Cotrimoxazole and the resupply of BEOC kits, both of which the communities have said they are willing and able to support, either through direct sales and/or community funds.

f. **Logistics**

The only logistics-related problems the project experienced were difficulty at the beginning finding timers for the FCHVs, which was ultimately resolved, and transportation during the rainy seasons, especially to the communities that lack roads. Access to stocks of cotrim and BEOC supplies has not been difficult to date, but could become so depending on the security situation. Communication between Nuwakot and Kathmandu has been good, with relatively consistent telephone and email access.

### **g. Information Management**

The CS-15 DIP made the case for not doing a population-based KPC survey because of the excessive costs and limited benefits, especially in a hilly area such as Nuwakot District. Instead, CS-15 relied on a set of strategies that would not only provide more regular data for monitoring progress but also build their partners' HMIS skills during its design and implementation. Another rationale for this approach was that the DHO and NGOs/NRCS cannot rely on surveys for their data needs due to their high cost in time and financing. The following information sources were listed in the DIP:

- Assessments of health worker performance and availability of essential supplies through routine visits and Health Facility Assessments;
- Assessments of health worker knowledge and skills during training courses;
- Discussions with community members, NFE and PE class participants, and recent clients of MCHWs and FCHVs, concerning their use of and satisfaction with CS-15 services, and understanding of BCC messages;
- DHO reporting system for data on use of MNC services, rates of pneumonia treatment, and logistics management information system data on availability of essential supplies; and
- Interviews with MCHWs concerning problems encountered in the delivery of MNC and BEOC services, and with FCHVs concerning burden on them of Cotrimoxazole sale.

In addition, the partners used pre/post testing extensively as part of the project trainings and reported keeping minutes for the meetings they attended to track progress.

Lack of access to the project site, due to heightened security concerns, limited the FE Team's ability to directly view the entire HMIS from the community through the health care system and the program partners. Instead, the FE Team focused on the reports generated during CS-15. Based on a review of these documents, however, there was significant evidence that the project was systematically collecting, reporting and using data as shown here:

- Quarterly monitoring and supervision plans were developed within the DHO and NRCS, which were frequently shared with the other partners.
- DHO staff reported keeping minutes of all meetings that were held at the district, Ilaka and VDC levels. On-the-spot feedback was also provided during these meetings.
- Pre and post-tests were being given to assess the quality and effectiveness of the project trainings.
- Checklists were used to assess IMCI activities, including FCHV pneumonia case management skills.
- DHO staff used exit interviews during joint supervisory visits and the results from this were later used for personnel reviews.

The capacity of the DHO staff, which will be the only staff continuing to provide CS-15 services beyond this grant, is promising because it centers on the use of the data collection forms and systems established by the Nepal MOH. The DHO took the lead in training the NRCS staff in the use of these forms and systems in Nuwakot. The two issues the DHO noted were the need for a new computer, fast enough to utilize the database for their HMIS, and a budget sufficient to cover the costs of printing out the necessary quantity of supervisory checklists and forms.

In addition, the project's approach to monitoring using the above-listed strategies has provided the DHO and NRCS staff with practical experience in the use of PRA, FGD, OR, and other data collection mechanisms, which they can call upon in the future as the need arises. Both the DHO and NRCS staff also developed skills in using this data to write measurable project indicators through their participation in the initial program design and the DIP Workshop as well as through their preparation of the project annual reports.

The section on New Tools/Approaches, Operational Research and Special Studies presented earlier in this report describe other M&E assessments used throughout the project. In addition, the project asked each MCHW to maintain a daily diary during their training, which were regularly reviewed by project staff. This is an interesting way to not only maximize their training, but also to sensitize them to the importance and usefulness of record keeping.

#### **h. Technical and Administrative Support**

The SC/HFO staff responsible for overseeing this project in Kathmandu have experience administering five Child Survival grants and in that time have developed a sound understanding of the administrative and technical aspects of the grant program. During CS-15 they also benefited from timely technical support from Eric Starbuck (CS Specialist officed at SC) and Tariq Ihsan (Regional Health Advisor officed at SC/Pakistan), who are responsible for backstopping CS-15. Eric and Tariq have made repeated site visits at key points during the life of the project, including proposal preparation, development of the DIP, training/implementation of the PRA qualitative study, implementation of the midterm evaluation, counseling training and participation on this final evaluation. In addition, both have provided support on a variety of technical areas, including sampling, OR methodology, questionnaire development, assistance in preparing presentations, and qualitative assessment methods, in response to queries from the project and whenever new technologies become available. The only TA needs that could not be addressed by the project, were for training on EPI-INFO and the BASIC's Health Facility Assessment tool.

#### **i. Management Lessons Learned**

- Developing an effective, working partnership is a time and labor-intensive pursuit, especially when it involves three fundamentally different types of organizations. The more activities that can be done jointly, especially at the beginning, the better for the long-term effectiveness of the program. Although, extra time needs to be factored into the program plans.
- A certain amount of conflict needs to be expected and planned for in a healthy partnership. As in relationships between individuals, disagreements need to be depersonalized, defined and solutions identified and selected together by the partners.
- Sensitization visits to other project sites and attendance at international conferences and workshops are not only strong rewards for program staff, they are also an excellent forum for gaining and sharing experiences and lessons learned with a broader community of organizations and individuals.

- Neutrality and the perception of neutrality are imperative to working successfully in a politically insecure location. In Nuwakot, this has meant making sure that both sides of the conflict understood and accepted the purpose and strategies of the project.
- Focusing on upgrading the HMIS as the primary data source for CS evaluations can be an effective alternative to the use of KPC surveys, especially since they help to build sustainable data collection, analysis, reporting and utilization skills and capacity in partner organizations, which do not have the resources to conduct KPC Surveys.

#### 4. **Other Issues Identified by the Team**

The unstable security situation was the main external factor impacting the project, from limiting the frequency of trainings and travel for supervision, to increased tension for the staff, volunteers and community members. This project was told that once CS-15 finished SC and NRCS would need to leave, even though both organizations have had a long successful history working in the district.

Project trainings and meetings have been disrupted; participants have been hassled on their way to program activities; and threats were made, yet, no one associated with the project has been physically hurt. It became apparent early in the project that the partners would not only have to be neutral, but also ensure that they maintained the appearance of neutrality to all. This meant complete transparency without a hint of alternate agendas. Everyone was oriented on what the project was there to do, how it was going to do it, and who was involved. All project activities were announced well before they were to occur and canceled or rescheduled whenever there was any hint of danger. All project staff and volunteers were told that nothing would be expected of them that they were not comfortable doing. On a more elemental level it was also important to ensure that all ethnic groups, castes, communities, and economic classes needed to see direct benefits to their lives as a result of the project and not just some groups.

#### 5. **Conclusions and Recommendations**

##### ***Major Conclusions:***

- Both the NRCS and DHO, with the support of Save the Children, have gained experience in working together and in partnering with an international NGO. They have developed skills in joint planning, monitoring, administration and problem solving that each should find useful in the future on their own and in working with other partners.
- The Final Evaluation Team found clear evidence that the capacity and skills of the DHO have increased during the CS-15 Project and based on the experience in the Phase I communities, the prospects for these improvements to continue are good.
- This tripartite partnership shared its resources and achieved project objectives successfully. With lesson learned incorporated, this type of model should be replicated in other locations within Nepal and elsewhere.

- Overall, the project achieved or exceeded four fifths of its objectives and had positive progress on the remaining ones. Therefore, it is very likely that CS-15 has had a positive impact on its goal of sustained reduction in under five and maternal mortality in Nuwakot District

The principal constraint facing CS-15 was the deteriorating security situation, which inhibited travel, supervision, and access to health care services and supplies, as well as denied contact with the communities for the FE Team. On the positive side, the security situation also directly led to the inclusion of NRCS in CS-15 during the DIP preparation. This last minute addition resulted in some delays in startup activities and areas of conflict between the partners, which was understandable considering the situation and were largely resolved during the project.

### ***Lessons Learned:***

- Regular supervision and refresher training of the FCHVs has been crucial to ensuring consistency in the quality of their work, especially with regard to accurate assessment, education of caregivers, proper dosing, and referral when necessary.
- The working relationship between the MCHW and the FCHVs in her VDC and, by extension, the participants in the Mothers Groups is an important factor by expanding access to MNC. The FCHV will often help the pregnant woman plan and prepare for her delivery and accompany her to the MCHW for the delivery. And together the FCHVs and Mothers Group participants provide health education to the women.
- Because each MCHW is dealing with a relatively small number of pregnancies and deliveries, her ability to recognize and respond to obstetric emergencies can diminish over time. This is especially true in districts such as Nuwakot, where the number of deliveries MCHWs can train on is relatively limited so they do not get as much hands-on experience dealing with complications either in their training or their practice. These skills need to be regularly reinforced through refresher trainings and supervision that entails review of cases.
- In FGDs with mothers, FCHVs and MCHWs, it was suggested that MCHWs should come from the same communities where they practice to limit the distance factor so they will be familiar with local customs, beliefs and social dynamics as well as be trusted by the community members themselves. While CS-15 had little or no influence on MCHW selection, the partners agreed during the final evaluation that this issue needs to be raised with the government.
- Use of FCHVs to help organize and facilitate the Mother's Groups has been effective. However, they will need on-going support and supervision to ensure their continued effectiveness in this role.
- Health education messages about PCM, CDD, MNC and RH services are more effectively presented through female facilitators than male. However, males need to be involved as well because they are the traditional decision makers in the family and community.
- Health education messages are more effectively delivered when incorporated into popular entertainment, such as the street dramas.

- Respected local people can be the most effective promoters for behavior change. For instance, traditional healers were reportedly helpful in supporting CS-15 program behavior change strategies (e.g., referral of pneumonia and very severe cases to skilled providers, stopping the use of dangerous traditional practices and promoting modern family planning methods.)
- NRCS staff noted that the project found it necessary to segregate some of the BCC trainees by caste and ethnicity to ensure that individuals were comfortable. Otherwise, the dropout rates increased.
- The project strategy of posting NRCS SNs and ANMs to work alongside DHO staff was an effective mechanism for building and solidifying health worker skills developed during the project trainings.
- Cross-district sensitization visits, where staff and volunteers visit other sites within and outside the program, were a popular and effective training method and incentive for trainees.
- Hiring staff from outside the district for positions within NRCS and the DHO means that orientation takes longer and the turnover rate tends to be higher. Staff hired from outside the district also tend to view their job as a short term 'stepping stone' assignment rather than a more permanent job.
- The project has increased the community's understanding of the roles of the FCHVs, MCHWs and VHWs. This has increased the demand for higher quality services.
- Training alone is not enough to ensure that newly developed healthcare provider skills and practices are sustained. Refresher trainings and supervision provided by staff, who are also trained and experienced on the topics, is necessary. This is especially true with BEOC, as it can be several months or years between the training and the time a MCHW will confront a delivery require BEOC skills.
- During their training the MCHWs maintained daily diaries, which were regularly reviewed and monitored by the trainers. This was an excellent way to demonstrate the importance of good record keeping to the MCHWs in a tangible way and to track and improve the quality of their work overall.
- The In-Charges, especially at the smaller MOH facilities, need to be trained in the same skills as the staff they oversee so they can provide more effective supervision and can help out when the MCHW is not available.
- Developing an effective, working partnership is a time and labor-intensive pursuit, especially when it involves three fundamentally different types of organizations. The more activities that can be done jointly, especially at the beginning, the better for the long-term effectiveness of the program. Although extra time needs to be factored into the plans.
- A certain amount of conflict needs to be expected and planned for in a healthy partnership. As in relationships between individuals, disagreements need to be depersonalized, defined and solutions identified and selected together by the partners.

- Sensitization visits to other project sites and attendance at international conferences and workshops are not only strong rewards for program staff, they are also an excellent forum for gaining and sharing experiences and lessons learned with a broader community of organizations and individuals.
- Neutrality and the perception of neutrality are imperative to working successfully in a politically insecure location. In Nuwakot, this has meant making sure that both sides of the conflict understood and accepted the purpose and strategies of the project.
- Focusing on upgrading the HMIS as the primary data source for CS evaluations can be an effective alternative to the use of KPC surveys, especially since they help to build sustainable data collection, analysis, reporting and utilization skills and capacity in partner organizations which do not have the resources to conduct KPC Surveys.

### ***Recommendations:***

#### **CB-IMCI:**

1. Options for addressing the need for quick and qualified treatment of pneumonia in infants under two months of age need to be identified and considered for adoption at the community level. The Child Health Division and the IMCI Working Group should be approached on this issue by the CS-15 Project partners.
2. The FCHVs in the municipality of Bidur also need to be trained in CB-IMCI by the DHO so the disadvantaged isolated individuals living in the pocket areas that are not currently being reached by the MOH system.
3. A pre/post test package should be developed and incorporated into CB-IMCI training. The Child Health Division of the MOH should be approached by the CS-15 Project partners.
4. The DHO, with the help of the NRCS and SC, should explore reasons why caretakers might not be giving more food than usual during episodes of diarrhea and reasons for the low knowledge on the associated danger signs that require medical attention by reviewing the PRA report and further study if need be. This could be incorporated into the upcoming school nutrition program scheduled to begin fall of 2003. Issues of definition and language may be important, as kids with diarrhea have less appetite, requiring small frequent feeds.

#### **MNC:**

5. The MOH should consider appointing another MCHW in the VDCs where the existing MCHW cannot meet the health needs of women of reproductive age (due to big geographical areas, long distances, big population, disadvantaged population). In addition, the MOH should consider adding an MCHW at each Health Post in the District, as they currently do not have MCHWs on staff.

6. The MOH should request that the Public Service Commission limit the criteria for hiring MCHWs to women from the same VDC to limit the distance factor and also so they are familiar with and to the communities.
7. The CS-15 Project partners should advocate with the MOH that trained TBAs should be supported and involved in a more formal way within the health care system because TBAs are still attending most of the deliveries in the project area and therefore, need to coordinate closely with the MCHWs and FCHVs in their communities. TBAs can also communicate health education messages and assist in community mobilization. They are recognized, respected by their communities and can assist in community mapping of pregnant women, which helps increase coverage of MNC services by skilled providers.
8. Rewarding or giving incentives to each MCHW for each delivery may be considered at the local government level to encourage and support this important health worker.
9. The data on home based services provided by the MCHWs needs to be recorded and reported on separately by the DHO so more specific and appropriate feedback can be provided.

#### BCC:

10. A brief workshop should be provided by the NRCS BCC staff to the DHO Health Education Unit staff to transfer as much of the project's BCC experiences, methods and materials as possible.
11. Health facility staff (in addition to MCHWs and VHVs) need to be trained and supported by the DHO to provide supervision and guidance to the FCHVs in their facilitation of the mothers groups to ensure that they continue.
12. To build literacy in both the mothers and the FCHVs, literacy training (PLA) inputs from the project's BCC strategies should be integrated into regular DHO services, including materials, supervision, and training provided through the DHO. This needs to be coordinated directly with the District Education Office and also the National Health Education Information and Communication Center.

#### CAPACITY BUILDING:

13. A followup assessment should be done by MOH staff on each health worker at the health facility s/he works at 4-6 weeks after their training to: 1) reinforce their new skills; 2) identify factors that might be limiting their effectiveness; and 3) make any necessary changes or improvements to the training strategies.
14. Save the Children should continue to seek out opportunities to further strengthen the capacity of the NRCS and DHO by sending key staff to national and international workshops and seminars, and through involving them in other child survival-related activities in Nepal and elsewhere.

## SUSTAINABILITY:

15. The CS-15 Phase-Over Plan needs to be further developed and implemented by the CS-15 partners.
16. SC in conjunction with the other CS-15 Partners should implement the same two assessments (both the FCHV/Cotrim Sale and MCHW Assessments) two to four years after CS-15 to assess the state of the project activities. Ideally, this should involve the same Nepalese participants who participated and contributed to this Final Evaluation.
17. SC and NRCS should explore other donor resources so they can remain involved with and support Nuwakot beyond CS-15, especially in the Phase II communities, which had less contact with the CS-15 project.
18. Early Childhood Development (ECD), School Feeding/Mass De-Worming and other programs that are being implemented in Nuwakot District should be considered by the CS-15 Project Partners as vehicles for continuing to provide the project's health education messages.

## PROGRAM MANAGEMENT:

19. The objective of the Child Survival and Health Grants Program is to “support U.S.-based PVOs and their local partners to carry out effective, quality child and maternal health and nutrition, family planning, HIV/AIDS and infectious disease programs...” Since working with local partners is such an important aspect of this program, USAID should incorporate questions on establishing partnerships into the DIP guidelines and considering adding a chapter on this topic into the Technical Reference Materials.

## 6. Results Highlight

In February 1996, a guerrilla war against the government of Nepal began which continues to this day. Prior to this, Nepal had enjoyed nearly two centuries of peace, and benefited economically from several decades of international tourism and trade. The conflict has caused insecurity and instability in the rural areas in particular – limiting government services, economic development, and many aspects of traditional village life. When the conflict started, Save the Children (SC) had been working in Nuwakot District for four years and was completing implementation of its first Child Survival project. By the time this CS-15 program was being designed, the nature of the fighting had become more violent and had spread throughout much of rural Nepal, including Nuwakot.

SC is committed worldwide to working in close partnership with local organizations, institutions, and communities. Because of the growing insecurity in the district, it was recognized during the design of CS-15 that the project would need to rely to an even greater extent on local partners, who would not only provide direct services, but also implement much of the capacity building strategies as well. SC's role would be that of mentor, change agent, trainer, and advisor, while maintaining final responsibility for project results and financial administration. It was also recognized that in order for project achievements to be sustainable, the project needed to focus on strengthening existing district health services, staff, and volunteers, rather than establishing new ones. The question became: How can sustainable improvements be made in maternal and child health services while relying to a large extent on locally available human resources?

The District Health Office (DHO) and SC found a qualified partner in the Nepal Red Cross Society (NRCS), that could act as a capacity building agent, helping the DHO improve and expand its services, while also managing a significant portion of the project budget. The NRCS had a network of volunteers in Nuwakot and a long respected history of working in the district. A measured approach was used in developing the partnership, involving joint planning and supervision of all program activities by each of the partners, and gradual transfer of these responsibilities to local partners as they demonstrated capability. The results of this approach can best be seen in the overall positive results achieved by the project. Primary findings of the project's final evaluation include:

- 535 Female Community Health Volunteers are now equipped to assess and treat life-threatening childhood pneumonia.
- 53 Maternal and Child Health Workers are better able to assist with safe deliveries and respond to obstetric emergencies.
- Key maternal health services have increased significantly since the project baseline, with antenatal visits increasing nearly three-fold, trained health provider-assisted deliveries increasing by two and a half times, and postpartum visits increasing by nearly four times.
- Training capacity in the Community-Based Integrated Management of Childhood Illness and Safe Motherhood is institutionalized within the DHO.
- In the eyes of the community and the evaluation team, the relationship between the DHO and NRCS staff is seamless.
- Community health workers and volunteers who are now better trained and more highly respected by the communities they serve and the health care system they support.

# **ATTACHMENTS**

## ATTACHMENT A

### FINAL EVALUATION TEAM MEMBERS

#### External Team Members:

Mr. Garth Osborn, Team leader, CS-XV final evaluation  
Dr. Tariq Ihsan, Asia Area Health Advisor, SC Pakistan  
Dr. Sun Lal Thapa, Chief, ARI/CDD Section, Child Health Division, MOH  
Dr. Ganga Shakya, Chief, RH Section, Family Health Division, MOH  
Dr. Sushil Nath Paykurel, DHO, Nuwakot  
Mr. Umesh Dhakal, Health Director, NRCS, Kathmandu  
Mr. Indra Mani Dhakal, District Education Officer, Nuwakot  
Mr. Laba Dev Awasti, Vice Secretary, MOE

#### Internal Team Members and Facilitators:

Mr. Bishnu Nepal, President, NRCS, Nuwakot  
Mr. Santa Kumar Dangol, Health Coordinator, NRCS Nuwakot  
Ms. Dewaki Khatiwada, RHO, NRCS Nuwakot  
Mr. Jay Shrestha, BCC Officer, NRCS Nuwakot  
Mr. Ram Prasad Joshi, Team Leader, NRCS Nuwakot  
Mr. Ram Sharan Pyakurel, IMCI Focal Person, DHO Nuwakot  
Ms. Dan Maya Thapa, Public Health Nurse, DHO Nuwakot  
Mr. Bal Mukunda Dongol, Statistical Assistant, DHO Nuwakot  
Mr. Amrit Maharjan, EPI Supervisor, DHO Nuwakot  
Ms. Naramaya Limbu, Health Team Leader, SC Kathmandu  
Ms. Chandra Rai, Sr. Program Officer, SC KTM  
Mr. Netra Prasad Bhatta, CS-15 Coordinator, SC Nuwakot.  
Mr. Krishna Gurung, DPM, SC Nuwakot.  
Mr. Ishwor Khatri, ED/CD Officer, SC Nuwakot.

## ATTACHMENT B

### FINAL EVALUATION METHODOLOGY

#### *Final Evaluation (FE) Team*

The Final Evaluation Team was made up of respected leaders from both national and district level Ministries of Health and Education, a representative from SC's regional office in Islamabad, experienced staff from each of the partnering organizations, and an external consultant. (See Attachment A for the complete list of Team members.)

#### *Data Collection*

This evaluation was implemented during the summer of 2003, a time of tension throughout Nepal and within the project area, brought on by eight-years of conflict, which has led to insecurity and instability in Nepal's rural areas in particular – limiting government services, economic development and many aspects of traditional Nepalese village life. On August 27, 2003, the second day the Final Evaluation Team met in Kathmandu, an eight-month long ceasefire ended. As a result, the Team Leader, along with senior SC/Nepal staff, and FE Team members in consultation with SC/HQ decided that the evaluation would need to be done from Kathmandu without travel to the field by the FE Team. This meant that members of the FE Team would not be able to view the project site or meet with community members, volunteers and many of the local staff directly to gain first-hand perspectives.

Two large **assessments** were implemented in the summer of 2003 that were presented to and used extensively by the FE Team in evaluating the CS-15 project:

*“Final Assessment Report of Selected Mothers/Caregivers and FCHVs in Management of Under-Five Children with Pneumonia and Diarrhea at Home,”* by Nandika Devi Shakya.<sup>1</sup> The goal of this assessment was to assess “the effectiveness of home management of children under five years with pneumonia and/or diarrhea by mothers/caregivers who were counseled by the trained FCHVs.” A three-part questionnaire used with mothers/caregivers assessed the following:

- Knowledge and practice of mothers/caregivers' home management of pneumonia.
- Knowledge and practice of mothers/caregivers' home management of diarrhea.
- Satisfaction with the counseling services and the counselor.
  
- A checklist was also developed and used to observe FCHV performance in counseling, diagnosing, recording, using IEC materials, and referring.

*“Final Assessment Report on MNC and OFAC Intervention Program,”* by Narbada Thapa.<sup>2</sup> The goal of this assessment was to respond to the research question, “Can the quality, availability and utilization of maternal and newborn care and obstetric first aid care be improved in the hills of Nepal by training and supporting MCHWs to

---

<sup>1</sup> See Attachment E for the full report.

<sup>2</sup> See Attachment F for the full report.

provide these services?" The study collected both qualitative and quantitative data to respond to this question:

- Interviews with community leaders, TBAs, AHWs and staff nurses to identify the usefulness of the program and service seeking behavior within the community.
- Focus Group Discussions with users of MNC and OFAC services as well as non-users. Discussion was mainly concentrated on the availability, accessibility, utilization and quality of care provided by MCHWs.
- Observation of services provided by MCHWs at SHPs and using simulation.
- Exit interviews of married women of reproductive age who came to SHPs for ANC/PNC or Newborn care to identify the quality of services provided by MCHWs and their satisfaction level.
- Interviews with MCHWs to assess their knowledge and practices.

A series of seven **Focus Group Discussions (FGD)** were held inside Nuwakot District, to collect perceptions, lessons learned and feeling about the project from each of the following groups:

- Female Community Health Workers
- Maternal Child Health Workers
- NRCS Staff
- DHO Staff
- Participants in the project's Behavior Change Communication Strategies
- BCC Motivators and Facilitators
- Adult Males

Ideally, at least two to three FGDs would have been scheduled with each of the above groups to ensure an adequate sample. However, due to the security concerns only one FGD was held with each group. The questionnaires were developed by the FE Team members and a brief training was provided to the Moderators and Notetakers on FGD techniques.<sup>3</sup> NRCS helped to schedule the FGDs in Nuwakot and transported respondents to and from the FGDs. After they were completed, the Moderators and Notetakers returned to Kathmandu where they debriefed the FE Team on their findings.

A set of three **organizational capacity assessments**, implemented during the project's baseline, were repeated as part of this final evaluation. These SC-developed tools were revised based on "Enhancing Organizational Performance: A Toolbox for Self-Assessment," by Charles Lusthaus, et. al., and used to identify capacity building needs and progress. Each of the three CS-15 partners – SC, the DHO and NRCS – were interviewed by members of the FE Team. The results can be found in Attachment G.

Members of the FE Team also did extensive **document reviews**, including project annual reports, DIP, previous evaluations, OR reports, and HMIS forms and reports.

### **Data Analysis:**

Members of the FE Team met extensively over the course of the FE field work, to review the data collected, identify major conclusions and develop recommendations. Lack of access to the project, resulted in this process being more similar to a desk review rather than the

---

<sup>3</sup> See Attachment D for copies of the FGD questionnaires.

standard CS evaluation. However, having all three partners in the discussion at the same time did allow for a lively dialog and some degree of checks and balances.

Finally, a debriefing was provided at the Ministry of Health in Kathmandu, which was attended by representatives from USAID, MOH, UN agencies, other PVOs, the entire FE Team, and staff from each of the partnering organizations.

## ATTACHMENT C

### PERSONS INTERVIEWED AND CONTACTED

NOTE: Due to the lack of access to the project area resulting from the heightened security concerns, the FE Team was only able to interview the following project staff in Kathmandu:

- Sushil Nath Paykurel, DHO/Nuwakot
- Ram Saran Pyakurel, IMCI Focal Person, DHO/Nuwakot
- Jiwang Tamang, SC/Kathmandu
- Naramaya Limbu, Health Team Leader, SC/Kathmandu
- Chandra Rai, Senior Program Officer, SC/Kathmandu
- Netra Bhatta, CS-15 Coordinator, SC/Nuwakot
- Keith Leslie, Field Office Director, SC/Kathmandu
- Ram Prasad Joshi, Team Leader, NRCS, Nuwakot
- Bishnu Nepal, President, NRCS, Nuwakot
- Jay Shrestha, BCC Officer, NRCS Nuwakot
- Dewaki Khatiwada, Reproductive Health Officer, NRCS Nuwakot
- Santa Kumar Dangol, Health Coordinator, NRCS Nuwakot

The two external consultants who implemented the following studies presented their results to the FE Team:

- Nandika Devi Shakya, author of “Final Assessment Report of Selected Mothers/Caregivers and FCHVs in Management of Under-Five Children with Pneumonia and Diarrhea at Home.”
- Narbada Thapa, author of “Final Assessment Report on MNC and OFAC Intervention Program.”

The two SC staff responsible for backstopping this project were interviewed:

- Eric Starbuck, SC/HQ
- Tariq Ihsan, SC/Islamabad

Staff from the health section of USAID/Nepal were interviewed:

- Sita Ram Devkota
- Dharma Pal Raman
- John Quinley

The following attended Focus Group Discussions held in Nuwakot:

- Eleven FCHVs
- Ten PHP and PLA Participants
- Ten MGHP Participants
- Five Supervisory staff Nurses and four Auxiliary Nurse Midwives from NRCS
- Seven MCHWs
- Five male community members
- Ten Facilitators and Motivators from the BCC Interventions
- Seven members of the DHO staff, including two Health Assistants, one Supervisory Public Health Nurse, and four Auxiliary Health Workers

## ATTACHMENT D

### QUESTIONNAIRES FOR FOCUS GROUP DISCUSSIONS

#### Female Community Health Workers (FCHV)

1. How long have you been with the project and what motivated you to become a volunteer?
2. What role and services do you provide to the community?
3. What are the main maternal and child health problems you face in your work?
4. Which project activity do you like the most?
5. What is the main purpose of the project?
6. How does your family support you in your work as a FCHV?
7. How does the community support you?
8. How do the health facility and the Red Cross support you?
9. How do you feel and are you satisfied about your role as a health care provider in the community?
10. How does the community perceive you as a health care provider?
11. What are the major changes that you have been observing in the community after the implementation of this program?
12. What support do you need to continue your work?
13. What has been the most important accomplishment of this project?

#### Maternal Child Health Workers (MCHW)

1. How long have you been with the project?
2. What are the main maternal and child health problems you face in your work?
3. What project activity do you like the most?
4. What was the main purpose of the project?
5. When do you refer a pregnant mother?
6. When do you refer a mother at the time of delivery?
7. What are the things you need to tell mothers about their newborn baby just after delivery?
8. What will you do if the placenta is not out within 30 minutes of delivery?
9. What emergency complications have you come across and how did you respond?
10. How has the project helped you to deal with obstetric emergencies?
11. Though the MCHWs have performed many ANC visits, why do you think fewer deliveries are being assisted by MCHWs?
12. Please explain what factors will make the pregnant mother seek service from an MCHW for her delivery.
13. What are the main positive changes in the community by CS15?
14. What kind of support will you need after the end of CS-15 to continue your work?
15. What were the problems and constraints in this project?
16. Which project activity did you find most satisfying?
17. What has been the most important accomplishment of this project?

#### NRCS Nurses

1. How long have you been with the project?
2. What are the main maternal and child health problems you face in your work?
3. What project activity do you like the most?
4. What was the main purpose of the project?
5. How did you manage the CB-IMCI trainings of the FCHVs?

6. What constraints did you experience in your work and how did you resolve them?
7. What skills have you developed as a result of the project?
8. What types of support will you need to continue your work after the end of CS-15?
9. What have been the main factors influencing the success of your work?
10. Discuss your relationship with SC, NRCS and the DHO.
11. What was the main accomplishment of this project?

#### DHO Staff

1. How long have you been involved with this project?
2. What are the main maternal and child health problems you face in your work?
3. What was the main purpose of the project?
4. How have you applied what you have learned during the CS-15 project?
5. What are some of the main challenges and gaps the project faced and how did they impact on the project accomplishments? What was your role in addressing these challenges and gaps as a health service provider?
6. How has working in partnership with the NRCS and DHO improved your ability to provide health care services more effectively and why?
7. What were the changes in the health care system as a result of the project interventions and its relationship with the community?
8. What are you doing to make sure that FCHV and MCHV services will continue? Do you feel that they are adequately prepared? If not, why?
9. What do you think are the future challenges?
10. What was the most effective project training and why?
11. What has been the most important accomplishment of this project?

#### BCC Participants:

1. How far do you live from the closest health facility?
2. What are the main health problems for women and children in your community?
3. Where do women and children go first when they are sick?
4. What motivated you to become a trainer?
5. How did you use the knowledge and skills that you received from the training?
6. How have you shared what you have learned with your families and the community?
7. How have you been able to share the benefits of the training you received with your family and the community?
8. What was the response or reaction from your family and community to your involvement in the program?
9. Please tell us about any times that people have asked your opinion about the training that you have received during this project.
10. What were the difficulties you faced in what you learned during the training and afterwards, and how did you overcome them?
11. What types of support, encouragement and inputs did you receive from the Facilitator?
12. In what ways could the training have been improved or been made more useful?
13. What was the most important achievement of the program?

#### BCC Motivators and Facilitators:

1. How long have you been involved with the project?
2. What project activity did you like the most?
3. What was the main purpose of the project?
4. Why did you choose to be a Facilitator/Motivator?

5. How did the training help you effectively run the program? How applicable were the skills and knowledge that you received from the TOT?
6. What role did you play in the design, implementation and monitoring of the program?
7. What difficulties did you face while conducting the training? What local strategies or solutions were used?
8. What was the response of the community (PLA/PHP/MGHP participants, husbands, local leaders etc.) to the training program? Did the participants play a role of change agent in the community?
9. How much support, feedback, encouragement and inputs did you receive from the project?
10. What could have been improved in your training and the support you received?
11. How was the reporting, monitoring and evaluation carried out in the project?
12. What kind of support is needed for you to continue your work after the end of the project?
13. What was the most important achievement of the project?

Adult Males:

1. What do you know about CS 15? Discuss some of the activities of the CS 15 project.
2. Do you feel there have been any changes in the health of mothers and children as a result of this project?
3. Have you received any services from this project? If yes, please describe.
4. Is anyone in your family involved in this project and how do you feel about their participation?
5. Who used to make decisions about seeking health care services in your family? Has this changed?
6. How do you feel about the skills of the FCHVs and MCHWs?
7. What should be the approach to strengthening FCHVs and MCHWs?
8. Has this project increased the availability and accessibility of health services in your VDC?
9. Where do people go for family planning supplies?
10. What are the most common family planning methods?
11. What are the ways to involve male community members in strengthening health care services in the future?
12. What is your overall impression of CS 15 and do you think this type of joint project should be continued?

**ATTACHMENT E**

**Final Assessment Report  
Of  
Selected Mothers/Caretakers, FCHVs  
on  
Management Of Under Five Children with Pneumonia and  
Diarrhea  
At Home**

Submitted to:  
Save the Children US  
Himalayan Field Office  
Maharajgunj, Kathmandu  
Nepal

By:  
Nandika Devi Shakya  
Consultant

September 16, 2003

# Contents

## Pages

<b>Abbreviation</b> .....	3
<b>1. Chapter: Introduction</b>	
1.1.Introductory Background .....	5
1.2.Objectives .....	6
<b>2. Methodology</b>	
2.1.Study Designs .....	7
2.2. Instrumentation .....	7
2.3.Sampling Technique .....	8
2.4.Data Collection Procedure .....	9
2.5 Data Analysis .....	10
<b>3. Results</b> .....	11
<b>Discussion and Recommendation</b> .....	22

### **Annexes:**

1. Questionnaires A, B and C and observation checklist.
2. List of CBAC Trained FCHVs of Nuwakot District

## Abbreviation

---

ARI	: Acute Respiratory Infection
ANM	: Auxiliary Nurse Midwife
AHW	: Auxiliary Health Worker
BCC	: Behavioral change and communication
BEOC	: Basic Essential Obstetric Care
CDD	: Control of Diarrhoeal Disease
CB-IMCI	: Community Based Integrated Management of Childhood Illness
CS-XV	: Child Survival XV
CHW	: Community Health worker
DHO	: District Health Office, District Health Officer
DD	: Diarrhea Disease
DTOT	: District Training of Trainer
DPM	: District program Manager
FCHV	: Female Community Health Volunteer
F/P	: Family Planning
HF	: Health Facility
HC	: Health Coordinator
HP	: Health Post
HA	: Health Assistant
IC	: Ilaka Coordinator
JJ	:Jeevan jal (Oral Rehydration Solution)
JSI	: John Snow Incorporation
MDO	: Monitoring and Documentation Officer
MCHW	: Maternal and Child Health Worker
MNC	: Maternal and New Born Care
MoH	: Ministry of Health

MTOT	: Master Training of Trainer
NRCS	: Nepal Red Cross Society
OPD	: Out Patient Department
ORS	: Oral Rehydration Solution
ORT	: Oral Rehydration Therapy
PCM	: Pneumonia Case Management
PHCC	: Primary Health Care Center
PHCCI	: Primary Health Care Center Incharge
PNC	: Post Natal Care
PHO	: Public health Officer
R/R	: Respiratory Rate
RHO	: Reproductive Health Officer
SC/US	: Save the children USA
S/HA	: Senior HA
SN	: Staff nurses
SHP	: Sub Health Post
SHPI	: Sub Health Post Incharge
TOT	: Training of Trainer
TTBA	: Trained Traditional Birth attendants
THs	: Traditional Healers
VDC	: Village Development Committee
VHW	: Village Health Worker
WHO	: World Health Organization

# Chapter 1

## **1.1. Introduction**

### **1. Introductory background:**

Nuwakot is situated in north west of Kathmandu at an altitude ranging from 518 to 4,867 meters. This is a hilly district having 13 Ilakas. Each ilaka has approximately five Village Development Committees (VDCs). There are altogether 61 VDCs and 1 Municipality. Each VDC has nine wards. The total population of this district is 266,232 with 48,928 households having 40,441 children under the age of five and 55,323 women aged 15-45 years old. The total female population is 13,4887<sup>1</sup>. Majority of the population is Buddhists of Tamang ethnic group. They are the most disadvantaged group having low literacy rate. The infant mortality rate in this part of the country is highest (94 per 1,000 live births). The major causes of under five deaths are expected to be due to pneumonia, diarrhea, birth-related causes and malnutrition. Save the Children US, Himalayan Field Office, Nepal Program has been implementing maternal and child program since 1981 to reduce this burden.

Save the Children US started child survival-XV project through its partner NGO Nepal Red Cross Society along with Nuwakot District Health office in October, 1999 in 32 VDCs for better survival of under five year children. There are four important interventions undertaken by this project. Among them, Pneumonia cases management (PCM) and control of diarrhea disease (CDD) are two important interventions of this project. These interventions were launched as a part of Community Based Integrated Management of Childhood Illness (CB-IMCI) program in Nuwakot since 2001. The program aimed at reducing the morbidity and mortality rate of children under five years of age by training and supporting community level health volunteers and workers - Female Community Health Workers (FCHVs), Village Health Workers (VHWs) and Maternal and Child Health Workers (MCHWs) and maximizing home care through caretakers at home. In order to achieve this, FCHVs were trained to assess, treat and counsel the children with pneumonia and diarrhea, and teach the mothers/caretakers regarding the management of their care at home. There are 538 trained FCHVs on PCM who sell cotrimoxazole and 980 FCHVs on CDD.

---

(1) Population census of Nepal 2001

(2) Thapa. S. Infant mortality and its correlates and determinants in Nepal, A district level analysis Journal of Nepal Medical Association 1996 vol. 34

(3) Children and Women of Nepal: A situational Analysis, National Planning Commissions and UNICEF

(4) Partnership in Hills of Nepal for Maternal and Child Survival: CS-15 Detailed Implementation Plan, 31<sup>st</sup> March, 2000

The training of FCHV was done in two phases. The first phase took place in between June 20<sup>th</sup> and July 10<sup>th</sup>, 2001. The second phase was held in between 25<sup>th</sup> Feb and March 20, 2002. The CB-IMCI trained staffs have been supervising and monitoring them regularly. As per the findings of performance assessment of the FCHVs during the first phase (as of Annual Report of Oct.01-Sep.02) and second phase (June-August, 02) on FCHVs' abilities regarding correctly assessing, treating and counseling for pneumonia were 83% and 87% where as for Diarrhea were 94% and 96% respectively.

This rapid survey looked at the performances of the trained FCHVs regarding an over all effectiveness of home management of children under five years with pneumonia and diarrhea by mothers/caretakers who were counseled by these trained FCHVs. In addition to this, the quality of FCHVs' counseling services and their performance constitute the final rapid survey.

## **1.2. Objectives of the study:**

The final rapid assessment/survey included the entire VDCs of Nuwakot district. This study conducted from 26<sup>th</sup> July to 3<sup>d</sup> August, 2003. The aim of this study was to assess the achievements of the project in sustained delivery of selected child survival services by local women health workers i.e. FCHVs especially in the management of under five children with pneumonia and diarrhea.

The objectives of the assessment were:

- To assess the quality of counseling services provided by FCHVs in relation to the:
  - mothers/caretaker's knowledge and practices regarding the administration of cotrimoxazole tablets—correct dose & course - who were counseled by the FCHVs.
  - mothers/caregivers' knowledge in recognizing the danger signs of pneumonia and diarrhea among children under five year.
  - determine the current knowledge, and practices of mothers/caretakers regarding home care management – three rules of home care - of children under five year with diarrhea.
  - satisfaction of mothers/caregivers with the services
  - use of IEC materials.
- To assess the performance of FCHVs in managing under five children with pneumonia and diarrhea, and in counseling the mothers/caretakers.

## Chapter 2

### 2. Methodology:

#### 2.1 Study design

A community based exploratory cross sectional design was selected for this study to explore the over all effectiveness of the home care management of pneumonia and diarrhea among under five children .It surveyed the mothers/caretakers of those children who were counseled by FCHVs. It also assessed the performance of the FCHVs' performance in the management of these conditions and the satisfaction of mothers/caregivers in their counseling services. The techniques used for the data collection were record review, observation and interview.

#### 2.2 Instruments

There were four sets of tools used for this assessment. Three sets of questionnaires were prepared for assessing the management of pneumonia, diarrhea, and the quality of counseling service provided by trained FCHVs which were used only for the interview of mothers/caregivers. One observation checklist was developed for the performance evaluation of the FCHVs.

Tool 1 (A) contained questions regarding knowledge and practice of mothers/caretakers' home management of pneumonia (see Annex 1). There are 15 items to be answered. The questions were to ascertain whether the child was seen and treated with cotrim by the FCHV and the caretaker has given the proper dose and course as per FCHVs' advice or not. If the child had been treated, the mother/caretaker was asked about the dosage and course of the medicine, its duration and the third day follow up, and method of administration of medicine. The mothers/caretakers were also asked on their knowledge regarding danger signs of pneumonia, recognition of signs that warns them to take the child to hospital/health workers.

Tool 2 (B) was to collect information from mothers/caretakers about the home management of diarrhea. The tool contains questions regarding knowledge and practice regarding the use of food/ fluid/ ORS, preparation of ORS, home therapy, and referral system for diarrhea.

Tool 3(C) contains questions related to the satisfaction of the counseling services provided by the trained FCHVs. The mothers/caretakers of children with pneumonia as well as with diarrhea had to answer this questionnaire. This questionnaire had seven items regarding the behavior of the FCHVs towards the mothers/caretakers, the quality of the counseling, and her willingness to use the service of the FCHVs in future or recommending her service to others.

Tool 4 (D) was a checklist to observe the performance of FCHVs in counseling, diagnosing, recording, using IEC material, referring under five children with pneumonia and diarrhea, and counseling their mothers/caretakers.

The questions were translated in Nepali language. The questionnaires were pre-tested and refined before using it for the actual data collection.

### 2.3 Sampling technique

All the FCHVs trained on community-based ARI & CDD (CBAC) of Nuwakot were the study population for this study. The updated DHO record had 535 FCHVs in their list who were trained on CBAC.

The sample size was calculated by using following statistical formula<sup>5</sup> .  
$$n = z^2 pq/d^2$$

Where n= sample size, z= statistical certainty chosen p= estimated prevalence, q= 1- p  
d= precision desired. (Here d= .10)

The statistical certainty chosen =95% (z=1.96)(5)

The value of p was defined by the coverage rate that required the largest sample size (p= .5), The value of d depends on the precision or margin or error desired (here d=.10)

By replacing the values in the formula, the sample size (n) was calculated as below

$$n = z^2 pq/d^2$$
 or

$$n = (1.96 \times 1.96)(0.5 \times 0.5)/(0.1 \times 0.1)$$

n= 96

The calculated number of sample size is 96 for this study. Therefore, 96 numbers of samples were selected from the total population of 535.

### 2.4. Sample selection

First of all a list of all 535 FCHVs by VDCs i.e. with FCHVs of the same VDCs listed together, grouped close to each other in the list (Annex 2). Then the sample interval was determined by dividing the total population of FCHVs (535) by the sample size (96). The sampling interval calculated was 5.6. This means, there was an interval of 5.6 sample numbers while choosing samples from the list. And the team picked randomly a number between 1 and 6 by lottery method to identify the first FCHV. To pick each of the remaining 95 FCHVs, 5.6 was added to the previous number and round to the nearest whole number like one of the interviewers volunteered and picked number 3 which was the first FCHV. The subsequent samples were identified by adding 5.6 to the preceding number e.g.

for the second sample 5.6 was added to 3 to calculate the second sample number. The calculated number was 8.6. But the second sample was selected as 9 as it was the closest whole number available. This process was carried out until the sample size was 96 or the numbers in the FCHVs list ended. Thus in this assessment, a systematic random sampling method was used, as this was the final evaluation of the FCHVs, trained on PCM and CDD including Cotrimoxazole selling throughout the Nuwakot district. This sampling method enables better sampling representation in the district. The selected 96 FCHVs were divided among the trained survey teams.

---

(5). Mahajan, Dr. B.K(1989) Methods of Biostatistics for Medical Students and Research workers, Jaypee Brothers, Medical Publishers (P) Ltd. G16, EMCA House, 23/23B Ansari RA 6 D, Daryanganj, New Delhi 110002. India

## **2.5. Data collection procedure**

There were 42 interviewers made available for the data collection by DHO. They were divided into 21 groups (Annex 3). Each group had to interview 3 to 6 FCHVs depending on the distance. The interviewers were health workers trained on PCM and CDD. The FCHVs assigned to interviewers were from their own area because of the security situation because there was risk for outsiders compared to the locals. The interviewers were oriented regarding the objectives and method of data collection. They practiced the interviewing technique before going to the field for interviews. The interviewers were given direction about how to contact the FCHVs and their mothers/caretakers who were counseled. They were asked to find the mother/caretaker who was counseled most recently by the FCHV and if the most recently counseled mother/caretaker can not be found, in that case they need to find the next most recently counseled. If the surveyor can not find a recently treated diarrhea or pneumonia case for FCHV, then he/she goes to the next closest FCHV. They were given the instruction guideline for this process as well.

The interviewers contacted the randomly selected FCHVs assigned to them. After locating the FCHV, they looked at their record and selected one mother/caregiver of a child with pneumonia and one with diarrhea who had been recently treated (in last month) by the interviewed FCHV. They recorded the names of mothers/caretakers, their home address, date of treatment, name and age of child under five treated for pneumonia and diarrhea in the last month.

Every mother/caretaker had been interviewed by the interviewer for the two questionnaires - Questionnaire A for pneumonia, B for diarrhea, C for satisfaction on both pneumonia and diarrhea. If the mother/caregiver was the same for the child/children with pneumonia and diarrhea only one C questionnaire was filled by the interviewer for this FCHV. The interviewer observed the performance of the FCHV, and filled the observation checklist related to treatment and counseling of mothers/caregivers with pneumonia and diarrhea. If the selected FCHV had not treated either of those conditions next nearest FCHV in the area (Ilaka) were contacted.

## **2.6. Data analysis**

The collected data were hand tallied. The data tabulation forms were prepared after the interviewers departed to their respective VDCs for data collection on July 28, 2003. All the questionnaires were checked for completeness and accuracy, and enquiry was made through telephone call or meeting interviewers personally to clarify some of the queries in the data sheets as soon as the data were received.

The checked data were compiled and hand tallied in the tabulation forms by the interviewers. The interviewers were trained before the tabulation was done. The tabulation work started from August 1 - 2, 2003. After the tabulation, the data analysis done as following:

The findings of this Rapid Assessment Survey were shared among the district health office (DHO), Nepal Red Cross Society (NRCS) and the interviewers on August 3 in the afternoon.

## **Activities carried for rapid assessment in Nuwakot**

---

Date	Duration	Activities
26 <sup>th</sup> July	1 day	-Arrival of the Kathmandu Save the Children team including the consultant in Nuwakot -Meet the Save the children Nuwakot team and review the list of FCHVs list -Review the questionnaire for pre-testing -Plan Schedule for NRCS, DHO staffs and the interviewers
27 <sup>th</sup> July	1 day	-Meet the DHO, NRCS staffs and the interviewers -Orient the objectives of the meeting -Select the samples and the interviewers and group the interviewers -Train the interviews regarding the use of the questionnaires and checklist -Pretest the questionnaire.
28 <sup>th</sup> July to 2 <sup>nd</sup> August	6 days	-Data collection and tabulation -Supervision
3 <sup>rd</sup> August	1day	-Data analysis -Briefing

## Chapter 3

### 3. Assessment Findings

There were 42 interviewers doing the assessment for the 96 FCHVs and the mothers/caretakers counseled by them for the management of pneumonia and diarrhea. The result consists of the assessment of knowledge and skill of 98 FCHVs' performances on management of under five children with pneumonia and diarrhea, and assessment of 93 and 94 mothers/caretakers' knowledge and skill in the management of under five children with pneumonia and diarrhea respectively. The assessment result of those mothers/caretakers' satisfaction level of the FCHVs' services is also presented. The results are categorized and presented below.

#### 3.1. Profile of FCHVs, mothers/caretakers of under five children with pneumonia and diarrhea

The profile of FCHVs, and the mothers/caretakers of under five children with pneumonia and diarrhea are given in table 1. There were 98 FCHVs contacted for the study to observe their knowledge and skills on the management of under five children with pneumonia and diarrhea. Although the sample chosen for the study was only 96 FCHVs, some of the FCHVs did not have either pneumonia or diarrhea cases treated in the last month so four FCHVs from near by were included. The respondents - mothers/caretakers - of under five children for pneumonia and diarrhea were 93 and 94 respectively. There were two non-respondents. Table 1 shows that most of the FCHVs were of the age between 26 to 46 years where as the mothers/caretakers of children of both pneumonia and diarrhea were

between 15 to 35 years of age. The mean age of FCHVs is 37 years in contrast to the mothers/caretakers of both the conditions, which were 28 and 29 years for pneumonia and diarrhea respectively. So the FCHVs were more mature than the mothers/caretakers. In regards to the literacy, there were 83 (84.7%) literate FCHVs in comparison to 48 (51.5%) and 35 (37.3%) literate mothers/caretakers of pneumonia and diarrhea respectively. This shows FCHVs are more literate compared the mothers/caretaker of children with pneumonia and diarrhea. Regarding the ethnicity of the mothers/caretakers, most of them belong to Brhamin/Chhetri and Tamang/Lama group of people. This result seems to be in consistent with the ethnicity of the FCHVs as well

**Table 1. Profile of FCHVs, mothers/caretakers of under five children with pneumonia and diarrhea**

Characteristics	FCHVs Number % N=98		Mothers/caretakers Pneumonia Number % N =93		Mothers/caretakers Diarrhea Number % N=94	
	Age					
15-25 years	15	15.3	43	45.8	37	39.6
26-35 years	31	31.6	33	35.1	41	43.6
36-45 years	30	30.6	10	10.6	13	13.8
46+	22	22.5	7	7.5	3	3.1
Education						
Illiterate	15	15.	46	48.9	59	62.7
Literate						
Class 1-5	60	61.3	28	19.1	19	20.2
5-10	22	22.4	18	2.1	13	13.8
S.L.C.+	1	1.1	2		3	3.1
Ethnicity						
Brahmin/Chhetri	45	45.9	38	40.4	31	33
Tamang/Lama	30	30.6	37	39.4	39	41.5
Rai Gurung	12	12.2	6	6.4	4	4.2
Newar	10	10.2	7	9.6	11	11.7
Marginalized	1		4	4.2	7	7.4
Others	0	0	0	0	2	2.
<b>Relation with the child</b>						
Mother			75	79.8	84	89.4
Father			9	9.6	6	6.4
Gr.mother/father			9	9.6	4	4.2
Others			1	1.1	0	0

### 3.2. The knowledge and skill of the FCHVs in managing children with pneumonia

The interviewers assessed the knowledge and skills of the FCHVs on managing the children with pneumonia by using observation checklist, which is shown in table 2. The table illustrates that median frequency of 90.8% with the mean deviation of 14 in effectively managing the conditions. The target objective of CS 15 is - 80% of the trained FCHVs correctly assess, treat and counsel for pneumonia. The result demonstrates that objective is achieved. However there are some room for improvement in areas like, asking the mothers about the signs of sleepiness or lethargy/difficult to awaken, looking for the sign of malnutrition in the child, and using home therapy card for the classification of the severity of the disease and keeping the accurate record of the conditions. These components are as important as the rest of the components.

### CB-IMCI Follow up Observation Checklist for FCHV

Table 2. FCHVs' knowledge and skill in managing under five children with pneumonia

<b>Components</b>	<b>Number N=98</b>	<b>Percentage %</b>
<b>Asking caretakers the child's Age</b>	96	98
Ability to drink/suck Breast milk	93	94.8
Duration of cough	89	90.8
Sleepiness or lethargy/difficult to wake the child	45	45.9
Counting/seeing/measuring Counts child's respiration by using timer	98	100
Looks for chest in drawing	97	99
Looks for signs of severe malnutrition	52	53
<b>Using IEC material appropriately to teach home therapy regarding:</b>		
Provision of appropriate home care	93	94.8
Administration of medication	85	86.7
Classification of home therapy (card)	67	68.3
Accurate follow up visits	92	83.8
<b>Accurately measuring body temperature, classifying the disease, giving medicine, recording</b>	Yes Number %	No Number %

<b>and reporting</b>				
Measures fever and low body temperature	94	95.9	3	3
Makes the classification of the disease correctly	89	90.8	7	7.1
Provides medicine according to the classification	92	93.8	5	5.1
Keeps the records correctly	70	71.4	28	28.5

### 3.3. The Knowledge and skills of FCHVs in the management of diarrhea

The knowledge and skills of FCHVs on managing the children with diarrhea was also done by using a observation checklist and the result is shown in table 3. The median frequency of knowledge and skill for the FCHVs in this table is 88.7% with 9 as the mean deviation. This implies the fulfillment of the set objective as the percentage expected of FCHVs correctly assessing, treating, and counseling, was 80% for diarrhea as well. But some of the important components like asking the mothers about the presence/absence of vomiting, observing for weakness, thirst and absence of tear, are important signs to diagnose the severity of the disease which needs to be improved.

**Table 3. Knowledge and skill of FCHVs in managing children with Diarrhea**

<b>Components</b>	<b>Number</b>	<b>%</b>
<b>Asking the mother/caretaker about:</b>		
Age of the child	91	92.8
Child's ability to drink and suck breast milk	87	88.7
Duration of diarrhea present	91	92.8
Presence/absence of blood in stool	82	83.6
Presence/absence of vomiting	60	61.2
<b>Observing the child for:</b>		
The weakness	60	61.2
Thirst	75	76.5
Absence of tear	66	67.3
Sunken eye	89	90.8
Skin elasticity	93	94.8
<b>Providing appropriate therapy:</b>		
Gives advice and provides ORS	87	88.7
Suggests other fluids	89	90.8
<b>Counseling three home rules to mothers/care takers:</b>		
Plenty of fluid than usual	97	98.9
Frequent food than usual	97	98.9
Return to health facility if danger signs develop	86	87.7
<b>Technique of preparation of ORS</b>		
Yes	92	93.8
No	5	5.1

### 3.4. Treatment of Children suffering from Pneumonia and Diarrhea

There were 18 (19.4%) and 75 (80.6%) of the children with pneumonia between the age of 2-24 months and 24-60 months respectively. For diarrhea the number of children were 10 (10.6%) and 84 (89.4.3%) between the age group of 2- 24 months and 12-60 months respectively whose mothers/caretaker were interviewed. This shows that the number of mothers having children of 12-60 months old were more than 2-12 months old ones in both conditions.

The number of children assessed and treated with Cotrimoxazole for pneumonia were 93 in number. However the children assessed and treated for diarrhea were 94. Table 4 indicates the number of children treated for pneumonia and diarrhea by trained FCHVs in last one month, the specified time for the study. The most frequently found mode for Cotrimoxazole treatment was for one child (60%) followed by two children (20.4%). However the number of children treated by home therapy for pneumonia, and the treatment for diarrhea are quite dispersed. The average number of cases treated constitutes 15.5 to 15.6 cases in a month respectively for home treatment for pneumonia and for the diarrhea.

**Table 4. Number of children with pneumonia and diarrhea treated by FCHVs**

No. of children treated.	Treatment for pneumonia by FCHV				Treatment for Diarrhea by FCHV	
	# treated with cotrim	%	# treated with HomeTherapy	%	No.	%
1	57	61	20	21.2	32	34
2	19	20.4	23	24.5	23	24.4
3	7	7.5	6	6.3	12	12.7
4	5	5.3	9	9.6	19	20.2
5	2	2.1	7	7.4	5	5.7
6+	1	1.1	6	6.3	3	3.1

### 3.5. The administration of Cotrimoxazole given by mothers/caretakers

The administration of Cotrimoxazole given by mothers/caretakers is shown in table 5. According to the IMCI treatment regime the FCHVs have to give/advice on administering two tablets of Cotrimoxazole two times a day for five days to the mothers/caretakers of the children aged 2-12 months and three tablets two times a day for five days for children aged 12-60 months (1-5 years).

There were 18 mothers/caretakers giving two tablets two times a day for five days to their children aged 2-12 months and 73 mothers/caretakers giving three tablets two times a day for five days for their children aged 12-60 months. Among them, 2 mothers/caretakers did not give the proper dose and course of Cotrimoxazole for their children aged 12-60 months. The accuracy of giving medicine i.e. proper dose and course - for the children between the age 2- 12 was 100%. And for the children of 12-60 months, it was 97.4%. The mean

accuracy of administering the drug is 98.7%. It indicates that it is definitely a good achievement of the set objective regarding FCHVs' counseling on administration of Cotrimoxazole. It indicates that the set objective i.e. 80% of caretakers give proper dose and course of Cotrimoxazole is achieved more than it was.

**Table 5. Cotrimoxazole administration to the child with Pneumonia by the mothers/caretakers**

IMCI Recommended dose and frequency according to age	No. Of children	Administered by Mothers/caretakers		
		No.	gap	Accuracy(%)
2 Tablets 2 times for 5 days for 2-12 months old children.	18	18	0	100%
3 Tablets 2 times for 5 days for 12 - 60 months old children.	75	73	2	97.3%
Total	93	91	2	Mean =98.7%

### **3.6. The process of administration of medicine to the children with pneumonia by mothers /caretakers**

Regarding the question asked about process of administration of medicine, 80 (86%) mothers knew about the correct process of dissolving the tablet in a cup and feeding the child. However only 15 (17.2%) mothers/caretakers knew that if the child vomits they should give the medicine again after half an hour. This is very important information lacking among majority of mothers/caretakers, because the children with pneumonia have the tendency to vomit, and if this happens after giving medication, it will not have any effect on the child.

80 (86%) of the mothers/caretakers said that they continued giving the medicine and home therapy even though their children got better before the course of treatment was completed. This is a quite good response and should consider as the success in the efficiency on counseling technique of the FCHVs.

In the responses regarding the administering medicine to the children with pneumonia, the result showed that the majority of mothers (62%) had given the first dose in presence of FCHVs, followed by the mothers (33%) giving the complete course themselves. The remaining of the children had been receiving the medicine from other relatives. This implies that the mothers were the key person to be educated to prevent the children from the disease.

### **3.7. Third day follow-up advised by FCHVs and practiced by the mothers/caretakers**

The result regarding the question on the FCHVs' advice to the mothers about bringing their children for 3<sup>rd</sup> day follow up and how have they have been practicing, is presented in table 6. The table illustrates the correct advice of coming for follow up on the third day was among the majority (90.2%).

**Table 6. Third day Follow up advice given by FCHVs to mothers/caretakers of pneumonia**

The advice given on the day to come for follow up	Number N=93	%
Second day	4	4.5
Third day	84	90.2
Fourth day	2	2.2
Not told	1	1.1
Others	2	2.2

### 3.8. Mothers/caretakers' knowledge in recognizing danger signs of pneumonia

The mother/caretakers' knowledge in recognizing danger signs of pneumonia that requires consultation is presented in table 7. The table shows that the mothers/caretakers seemed to have fairly good knowledge in recognizing chest in drawing (80.6%) and child becoming more serious (87%) as danger signs than compared to the difficult/fast breathing (74.1%) which is equally important. The signs of difficult and fast breathing is a very important sign requiring consultation to save the life of the children. This should be given equal attention.

**Table 7. Mothers/caretakers knowledge of danger signs of pneumonia requiring consultation**

Danger signs	N=93	%
Difficult/fast breathing	69	74.1
Chest in drawing	75	80.6
Child becoming more serious	81	87
Others	7	7.5

### 3.9. Home Therapy for the pneumonia

Table 8. Illustrates the home therapy advised by the FCHVs and practiced by the mothers/caretaker of children with pneumonia. There were very less gap between what was taught and what is practiced. The advice of keeping the child warm was mostly (98.9%) advised therapy by the FCHVs and an equal percent of mothers/caretakers practiced it. And cleaning the nose of the child was advised by 84.9% and followed by 77.4% with the gap of 7.5% between FCHVs' advice and mothers/caretakers' practice. The component of giving warm juice of ginger with honey had no gap between the advice and practice. However the focus given by FCHVs in this component was minimum (38%). The widest gap between the advice and practice was observed in increasing food intake more than usual (11.9 %) for the child. The mothers/caretakers were found less confident in giving more food to the children with pneumonia. The reinforcement by further counseling is seen important in this component. The rest of the components- increasing breast feeding and giving more fluid than usual had fewer gaps between what was advised and what were practiced by mothers/caretakers. However, FCHVs' focus on advising them needed to be increased.

**Table 8. Home Therapy for pneumonia**

Advised by FCHVs Home therapy			Practiced by mothers/caretakers	
Components	N=93	%	N=93	%
Keeping warm	92	98.9	92	98.9
Increasing the frequency of Breast feeding	69	74.2	67	72.1
Giving more fluid than usual	70	75.3	67	72.1
Giving more food than usual	67	72.1	56	60.2
Giving warm juice of ginger - mixed honey	35	38	35	38
Taking to hospitals if danger signs are seen	56	60.2	50	53.8
Cleaning the nose	79	84.9	72	77.4
Others	14	15.1	8	9

### 3.10. Mothers/caretakers knowledge and practice in the management of diarrhea

The mothers/caretakers were asked in the survey about the breast-feeding practice of children during diarrhea. Only 88 mothers/caretaker responded this question. Among them, only 69 (78.4%) mothers/caretakers knew about frequent breast-feeding during diarrhea and practiced. This is the most cost effective, safe, nutritive, easily available and accessible method of providing therapy to the children, which needed to be practiced more than the result seen.

The home therapy practiced by the mothers/caretakers for diarrhea is illustrated in Table 9. The frequency of responses in giving plenty of fluid (87.2%) and Jeevanjal/ORS (90.4%) had a very good result and met the targeted objective. The responses to the component on giving more food (66%), and taking to hospital if condition becomes worse (61.7%) needs improvement

**Table 9. Home therapy practiced**

Components	Number N=94	%
Give plenty of fluid frequently (than normal).	82	87.2
Give more food frequently (than normal).	62	66
Feed Jeevanjal solution (ORS) frequently.	85	90.4
Take to hospital if condition worsen / does not improve.	58	61.7
Stop giving food.	2	2.1
Stop giving fluid.	1	1.1
Others	8	8.5

### 3.11. Advice on Preparation/administration of ORS by FCHVs

The mothers/caretakers were asked to recall the method of ORS preparation/administration as taught/advised by FCHVs, which is presented in Table 10. Almost all the components had above 80% results except for the last three. The component on hand washing, mixing the proportion of water and ORS solution, and stirring it, had above 90% responses, which is a very good result. However, the components on giving ORS again after 10 minutes if

the child vomits (37.2%), and frequent breast feeding during diarrhea (4.3%) were found to be less mentioned. These are important components, which should be given attention. The other equally important component is giving the ORS solution to child only for one day to maintain the hygiene and keeping the potency of the solution.

**Table 10. FCHVs advice on preparation feeding of ORS (Jeevan jal)**

Components	Number N=94	%
• Wash hands.	85	90.4
• Clean utensils.	80	85.1
• Pour 6 glasses of clean drinking water in a clean pot (dekchi).	93	98.9
• Mix one packet of ORS in water and stir well.	90	95.7
• Feed the child frequently.	81	86.2
• Keep the mixture covered.	76	80.9
• In case of vomiting, give the fluid again after 10 minutes.	35	37.2
• Keep the solution for one day only.	65	69.1
• Breast feed the baby as and when demanded in plenty.	46	48.9
• Others.	4	4.3

### 3.12. Three home rules for the treatment of diarrhea

Table 11 point # A illustrates the advice given by FCHVs on the three home rules of treating diarrhea, point # B illustrates the practiced by mothers/caretakers on three home rules of treating diarrhea and Point # C illustrates the fluid/food given by mother/caretakers to children during diarrhea. The result shows the efficiency of the FCHVs in treating diarrhea with home rules with mean frequency of 90.7% advising the home rules for diarrhea correctly. One should consider this as an encouraging result.

The home therapy practiced by the mothers/caretakers for diarrhea is illustrated in Table 11. The frequency of responses in giving plenty of fluid (87.2%) and Jeevanjal/ORS (90.4%) had a very good result and met the targeted objective. The mean result about three rules of home care practiced by the mothers/caretakers is 76.2. The responses to the component on giving more food (66%), and taking to hospital if condition becomes worse (61.7%) needs improvement.

There were highest percent of mothers/caretakers giving ORS (96.8%) followed by Soup/Dal (83.6%) and, then rice water (60.6%) to the children during diarrhea. The response on giving ORS is highly appreciable. However, the locally available easily digestible foods like rice water need to be encouraged. 90.4% of the mothers/caretakers said that they gave food frequently. Regarding the increased amount of food the response was only 73.4%.

**Table11. Three home rules for the treatment of diarrhea**

Components	Number N=94	%
A. Three Home rules Advised /taught by FCHVs		
Give fluids frequently (more than usual)	92	97.9
Give more food than usual	81	86.2
Take to health facility if no improvement/condition becomes worse.	83	88.2
B. Three home rules practiced by mothers/caretakers during diarrhea		
Give plenty of fluid frequently (than normal).	82	87.2
Give more food frequently (than normal).	62	66
Feed Jeevanjal solution (ORS) frequently.	85	90.4
Take to health facility if condition worsen / does not improve.	58	61.7
C. Fluids/food given by mothers/caretakers during diarrhea		
Jeevanjal (ORS)		
Water only	91	96.6
Soup /Dal	26	27.7
Rice water	78	83.6
Others	60.	60.6
	23	24.5

### 3.13. Danger signs stated by mothers/caretakers which require the consultation of FCHVs on management of diarrhea

The recognition of danger signs is presented in table12. The table shows the highest number of mothers/caretakers (76.6%) stating the sign of blood in their child's stool as the danger sign followed by deteriorating health conditions (75.5 %) and unable to drink and eat (71.3 %). The mother/caretakers going for the signs such as Lethargy/weakness (51.1%), too thirsty (40.4%) and sunken eye (59.5%) needed great attention. The average recognition of danger sign is only 62.4%. This needed improvement in the FCHVs counseling service.

**Table.12. Danger Signs stated by mothers/caretakers in children requiring consultation of FCHVs**

Danger signs	Number N=94	%
Blood in stool of the child	72	76.6
Unable to drink or eat	67	71.3
Lethargy/weakness	48	51.1
Too thirsty	38	40.4
Deteriorated health condition	71	75.5
Sunken eye	56	59.6

### 3.14. Quality of counseling services provided by FCHVs

The question regarding the quality of counseling services were asked to the mothers/caretakers of children with pneumonia as well as diarrhea. The total number

respondents were 187. The result is shown in table 13. Regarding the FCHVs' approach, the majority of mothers/caretakers found them polite (66.5%) followed by cooperative (44.2%) and friendly/respectful (40%). Rest of the characteristics scored below 40% in the frequency as seen in table. In this table the mothers/caretaker who would consult first in case of the similar health problems in their children in future, scored highest (87.2%) for FCHVs followed by traditional healers (11.7%) and health post staffs (11.2%).

Regarding the clarity, 90% of mothers/caretakers said that the advice/teaching given to them was clear and simple, followed by 8.4% finding it confusing and difficult to understand.

Responses to the questions asked to mothers/caretakers about the satisfaction of the FCHVs advice, consulting them again in future if their children have the same problem, and their willingness to refer the FCHVs to others, the result were 90.4%, 97.3% and 97.3% respectively for the first, second and the third questions which are quite encouraging to note and must be considered it as a success. It is clear that FCHVs are most preferred by mothers/caretakers indicating high satisfaction.

**Table 13. The response of FCHVs towards the mothers/caretakers 'approach, and their preferred person to consult first in future.**

<b>Components</b>	<b>N=187</b>	<b>%</b>
FCHVs' responses to mothers/caretaker	125	66.8
Polite	35	18.7
Normal/as usual	75	40
Friendly/respectful	7	3.7
Unfriendly and rude	83	44.1
Co-operative	42	22.4
Explains about the child's condition	54	28.8
Give time to clear doubts	61	32.6
Listens to their problems		
<b>Person first to consult by the mothers/caretakers in future if their children has pneumonia/diarrhea</b>		
Health workers in hospital	3	1.6
Health post staffs	21	11.2
Pharmacist	6	3.2
VHW	9	0.5
Traditional healers	22	11.7
TBA	8	4.2
Neighbors/friends	6	3.2
MCHW	8	4.2
<b>FCHV</b>	<b>164</b>	<b>87.2</b>

### **3.15. Mothers/caretakers' who understood the advice given by FCHV**

The mothers/caretakers were asked about their understanding level of the FCHVs' advice. The result is shown in table 14. It illustrates that the majority of the mothers/caretakers (71.8%) understood the FCHVs' advice all the time, followed by 22.8% of them understanding the FCHVs most of the time. There were only 4.7% mothers/caretakers who

understood the advice/teaching only some times. This result is satisfactory. There is a room for improvement by bringing the last two categories.

**Table 14. Mothers/Caretaker who understood FCHVs' advice**

Categories of frequency of understanding	Number. N=188	%
All the time	135	71.8
Most of the times	43	22.8
Sometimes	9	4.7
Other	4	2.1

### Discussion and Implication

The result of the rapid assessment will be helpful in designing the future programming for the implementing organizations. It helps to evaluate the strengths and weakness of the FCHVs performances objectively on management of children with pneumonia and diarrhea. The study findings demonstrated strongly that the FCHVs are skillful in managing and counseling to mothers/caretakers of children with pneumonia and diarrhea. However, there is limited supply of some of the IEC materials to the FCHVs which are essential for management of pneumonia. On the whole, the performances of FCHVs is praiseworthy. It clearly demonstrates that with proper guidance, support and training, FCHVs could be very helpful in improving the child health and survival. Giving them some in-kind incentives will boost their morale more and sustained their services. This may be discussed with the their respective VDC members. The study suggests that the FCHVs needed supervision in some aspects of management such as use of home therapy card for classification of diseases, looking for signs of severe malnutrition in children with pneumonia and keeping their records correctly (see Table1.). Similarly in managing children with diarrhea, the FCHVs found to be in need of guidance in understanding the importance of observing the signs of weakness, thirst and absence of tear and asking the mother/caretaker if the child is vomiting or not. These can save the child's life if detected earlier.

Regarding the counseling service, the FCHVs seem polite, cooperative and friendly, but they need to give more time to the mothers in making clear the doubts regarding the children's condition, and listen to their problems more (table13). Comparatively fewer mothers reported (Table7) difficult/fast breathing in pneumonia as a danger sign, which is a very important sign in management of pneumonia. So the FCHVs need to spend ample time to counsel the mothers/caretakers regarding this sign. In the same way, in the management of diarrhea also, when the FCHVs were actually observed for the knowledge of counseling to mothers/ caretakers regarding increased intake of food during diarrhea in table 3, the percentage of FCHVs doing this counseling was quite good. But actually only small number of previously counseled mothers/caretakers was practicing, especially in giving water and rice water (Table 11). This could perhaps be due to the lack of time and incentive, the FCHVs were getting for the amount of work done.

## **Recommendation**

The recommendation is made in view of the results obtained from the study. The aim of this is to improve the services of FCHVs even after the project comes to an end.

- The organization and government should strive towards the retaining and replacing the old /migrated FCHVs.
- The FCHVs should be supervised from time to time and provide necessary support particularly in late phase II area.
- DHO is encouraged to continue to support the trained FCHVs with the medicines, equipment and supplies on time.
- Management of safe keeping of medicine, equipment and supplies and records should be done by providing proper bags to the FCHVs.
- There should be at least semi-annual meeting with FCHVs to understand their problems and difficulties and update their knowledge and skills.
- The illiterate FCHVs should be given an opportunity for non-formal education classes.
- The FCHVs' job should be made more attractive by giving appropriate rewards.

## **Summary of the report**

A cross sectional rapid survey assessment was conducted in all 61 VDCs of Nuwakot district in August 2003. The aim of the survey was to assess the quality of services provided by trained FCHVs under the Child Survival 15 project, which was running since 1999. The assessment specifically looked at the quality/capacity of the trained FCHVs in managing the under five children with pneumonia and diarrhea. This was done by the client interview, observation of the FCHVs' performance and record review. The assessment results were verified against the fulfillment of the objectives set during detailed implementation planning of the project. The survey was done by observing the FCHVs' performance on correctly assessing, and treating the under five children with pneumonia and diarrhea, and counseling their mothers/caretakers. The targeted objective for performance on pneumonia management of the project is 80%.

One mother/caretaker of under five child with pneumonia and one with diarrhea who were treated within one month by the FCHVs were interviewed to assess the administration of proper dose and course of Cotrim and third day follow up for pneumonia and three home rules of diarrhea. The caseload assessment was done by reviewing the FCHVs' record of one-month time period.

The surveyors observed the performances of 98 FCHVs using the observation checklist. A total of 93 mothers/caretakers of under five children with pneumonia and 94 mother/caretakers with diarrhea were interviewed to assess the administration of Cotrim and follow up of three home rules. For the assessment of client satisfaction, 187 mothers/caretakers were interviewed using structured questionnaire. There were 42 trained staffs from district health office, Nepal Red cross Society and Save the Children US involved in the survey. These staff including the research consultant pre-tested and refined the tools and translated them into Nepali version before using it for the actual study in the field.

The finding on the demographic profile of FCHV and mothers/caretakers of under five children with pneumonia and diarrhea showed that the mean age of FCHVs is 37. The FCHVs' literacy rate is 84.7% and majority of them belong to the Brahmin/Chhetri followed by Tamang/Lama. The mothers/caretakers of children with pneumonia and diarrhea were also mostly from the same ethnicity. Regarding the age group the majority of the mothers/caretakers of children with pneumonia were between 15-25 years where as the mothers/caretakers of children with diarrhea belonged to the age group 30-35 years. The mean age of the first was 28 years and the 29 years respectively. Literacy rate is higher (51%) among the mothers/caretakers of children with pneumonia compared to the that of the mothers/caretakers of children with diarrhea (37.2%). Most of the caretakers were mothers in both the conditions.

More than 80% of the FCHVs are competent in managing pneumonia. All the FCHVs scored 90% in asking all the components as per the protocol except one i.e. is a child lethargic/sleepy and difficult to wake (45.9%). 100% of them counted child's respiration using timer, 99% of them looked at chest in-drawing but only 53% looked for signs of severe malnutrition which is also equally important. Similarly in the use of IEC material in teaching/counseling home therapy the responses were satisfactory (>83%) in all the components except in classifying the disease by using the home therapy card. More than 90% of FCHVs had knowledge and skill in correctly checking the temperature of the child, classifying the disease and giving medicine to the children with pneumonia. But only 71.4% of them were found to be keeping the records correctly. Similarly, the correct assessing, treating the children with diarrhea and counseling the caretakers were performed by more than 83% of FCHVs. Only 61.2% of them asked vomiting of children. And observation of sunken eye (90.8%) and skin elasticity (94.4%) were also low. 89% of them provided ORS and other therapy to children with diarrhea. Therefore, the objective i.e. 80 % of FCHVs assess, treat and counsel the under five children with pneumonia/diarrhea is achieved to a greater extent.

The review of a month's record showed majority of FCHVs caring one to two cases/children with pneumonia as well as diarrhea. The cases ranged from 1 to 6. In diarrhea one FCHV took up to 12 cases. The caseload depended upon the seasonal variation and the situation of the country, which were not favorable at the time of data collection.

The project is successful in achieving the objective related with proper dose and course of Cotrim – i.e. **80% of caretakers give proper dose and course of cotrim.** 100% of the caretaker with the children aged 2-12 months with pneumonia gave proper dose and course of Cotrim. But only 97.3% of the caretakers with children aged 12-60 months gave proper dose and course of Cotrim to their children. Cumulative mean correct dose and course is 98.7%. 90.2% of the caretakers reported that they were asked by FCHVs to bring their children on 3<sup>rd</sup> day for follow up. This reflects the effective counseling services of the trained FCHVs and the success of the project objective.

The most commonly reported dangers signs of pneumonia are child becoming more serious (87%) followed by chest in drawing (80.6%). Only 74.1% of them reported difficult and fast breathing which is also an important sign.

The result of the advice on the home therapy by FCHVs and practices by caretakers indicated that 98.9% of the caretakers received the advice on keeping the child warm and

practicing as well followed by 77.4% of them cleaning the nose (advice given FCHVs 84.9%). The other home therapies like increasing breast-feeding and giving fluid more than usual is 72.1% . The advice of giving more food (72%) was poorly responded by the caretakers in their practice (60.2%). The other two therapies - giving warm juice of ginger mixed with honey and taking the child to hospital if danger signs seen – have poor results as well as poorly practiced by the caretakers. This aspect of home care needs serious attention as the delay in taking the child to hospital will bring grave consequences and the administration of locally available home treatment with warm juice of ginger with mixed honey should not be underestimated.

In the practice of home therapy by caretakers during diarrhea, feeding ORS (Jeevan jal) seemed to be the most popular therapy (90.4%) followed by giving plenty of fluid (87.2%) which were very encouraging practice. However giving more food frequently (66%) and taking to hospital in case of child's condition becoming worse (61.7%) had poor response, indicating less importance given by the caretakers. This aspect of care needs improvement, as the delay in taking to hospital can be life-threatening effect. However, the poor result of completely stopping food and fluid during diarrhea indicates appropriate practice of home therapy by the caretakers. But effort should be directed towards eliminating responses in these two components and increasing in the other components of therapy.

Regarding the preparation and feeding of ORS (Jeevan jal), more than 80% of the caretakers remembered the correctly. But only 37.2% of them knew that that the fluid should be given again after 10 minutes if the child vomits. Similar, only 48.9% knew that the child should be fed plenty of breast milk and more frequently. This shows that there is a need for improvement in this aspect of care.

The three home rules of treatment for diarrhea is highly successful with highest result for giving more fluid than usual (97.9%), followed by taking the child to hospital if no improvement in condition or becomes worse (88.2%), and the giving more food than usual (86.2%) with 87.6 % mean correct result. However the gap between the FCHVs' actual advice and caretakers' perception and practice of home rules will be a very good researchable question for future.

The danger signs requiring consultation did not illustrate high result from the caretakers. The highest knowledge was in recognizing the blood in the stool of the child (76.6%) followed by deteriorated health condition (75.5%) , and then unable to drink or eat (71.3%). Only 60% of them identify lethargy/weakness, too thirsty, and sunken eye as danger signs. This also needs consideration in improving the caretakers' knowledge in future.

66.8% of the caretakers reported that FCHVs are polite, followed by being cooperative (44.1%) and friendly (40%) to them during the course of their children's treatment. 87.2% of them said that they will consult if their children get sick compared to traditional healers (11.7%) and other health post staff (11.2%). This indicates that they are highly satisfied with services of FCHVs.

71% of the caretakers said that they understood all the time while FCHVs advised them. This can be considered as a good result. The time spent by the FCHVs in counseling also was not known in this result, which can be a good for thought for future.

## **Conclusion**

The FCHVs, a local women, were found to be competent in managing children with pneumonia and diarrhea. The caretakers are also satisfied with the services provided by the trained FCHVs. The study also showed that the mothers were the major caretakers of the children who need to be involved in the education for pneumonia and diarrhea. Thus educating mothers could reduce the incidence of preventable diseases and deaths thereby the child survival rate may be improved. The project is successful in achieving its both objectives related with pneumonia and diarrhea. However, there are some need for improvement in the management of children with pneumonia and diarrhea by the trained FCHVs. So they may required follow up support.

**Annex 1**  
**Nepal Red Cross Society, District Health Office**  
 Save the Children US

A Rapid Survey Questionnaire regarding **mothers/caregivers'** management of pneumonia with under five year children.

District: ----- VDC: ----- Ward #: ----- Date: -----  
 Full name of FCHV ----- Education: -----  
**No of Pneumonia cases treated in last month: ----- # ARI cases treated with only home therapy ---- (See records/register).**  
 Mother/Caregiver's age (Years):----- Caste:----- Education:-----class passed.  
 Relationship with the child: -----  
 Child's age: (In months)-----  
 Name of Interviewer: ----- Signature:-----  
 Name of Supervisor: ----- Signature: -----

***Instruction:***

*Section A is questions on pneumonia; section B is on diarrhea and section C for both pneumonia and diarrhea.*

*Ask Section A and Section C to the mother/caregiver with a child with pneumonia treated by Female Community Health Volunteer (FCHV).*

*Ask Section B and Section C to the mother/caregiver with child with diarrhea treated by FCHV.*

**A. Questionnaire related to Pneumonia**

1. Did your child (Name of the child) have rapid and breathing difficulty in the last one month?
  - a. Yes
  - b. No  Go to questions diarrhea sections B and C.
  
2. Did the FCHV (Name of FCHV) assess your child?
  - a. Yes
  - b. No
  
3. Did your child receive treatment from FCHV (Name of FCHV)?
  - c. Yes
  - d. No
  
4. What did your child (Name of the child) receive from FCHVs (Name of FCHV)?
  - a. Cotrim tablets
  - b. Others specify -----
  
5. Is/was your child on medicine tablet (Cotrim) for the treatment?
  - a. Yes
  - b. No.

6. Who is/was feeding the medicine to the child (Name of the child)?
- a. First dose, the FCHV and the rest I give/gave
  - b. Me throughout
  - c. Family member at home –specify who -----  
Relationship -----
  - d. Others (specify)-----
7. What did the FCHV tell about to give how many Cotrim tablets to your child (name of the child)?
- a. **One tablet in the morning and one in the evening for five days**
  - b. **Two tablets in the morning and two in the evening for five days**
  - c. **Three tablets in the morning and three tablets in the evening for five days**
  - e. **Others (Specify)-----**
8. What did the FCHV tell about bringing the child again?
- a. 1<sup>st</sup> day
  - b. 2<sup>nd</sup> day
  - c. 3<sup>rd</sup> day
  - d. 4<sup>th</sup> day
  - e. did not tell
  - f. others( specify)
9. How do you give the medicine to the child? (Multiple answers possible)
- a. Dissolve the tablet/medicine in cup and fed with spoon.
  - b. Mix the powder with mother's milk/food
  - c. Give the mixture slowly to the child
  - d. In case of vomiting give the medicine again within half an hour
  - f. Others (specify)-----
10. How many Cotrim tablets did you give to your child (name of the child)?
- a. **One tablet in the morning and one in the evening for five days**
  - b. **Two tablets in the morning and two in the evening for five days**
  - c. **Three tablets in the morning and three tablets in the evening for five days**
  - e. **Others (Specify)-----**
11. What do you do if the child gets better before the course of the medicine is completed?
- a. Stop giving the medicine but continue the home therapy.

- b. Discontinue both
- c. Continue only the medicine till it is completed
- d. Continue the medicine and the other home treatment
- e. Others (Specify)-----

12. Do you remember what home therapy have you been explained to do by the FCHV (Name of FCHV) for your sick child (Name of the child)?

- a. Keeping the child warm
- b. Increasing the frequency of breast feeding
- c. Cleaning the nose
- d. Giving more fluid than usual
- e. Giving more food than usual
- f. Giving warm juice of ginger mixed with honey
- g. See the child for fast breathing and chest indrawing if so take the child to the hospital.
- h. Others (specify)-----

12. What did the FCHV (Name the FCHV) tell you about the **danger signs and** symptoms of pneumonia that require immediate treatment?

- a. Fast/difficult breathing
- b. Unable to drink or eat
- c. Chest in-drawing
- d. High Fever
- e. Difficult to wake the child
- f. Low body temperature
- g. Severe malnutrition
- h. Others (specify) -----

14. What home therapy did you provide to your sick child (Name of the child)?

- a. Keeping the child warm
- b. Increasing the frequency of breast feeding
- c. Cleaning the nose
- d. Giving more fluid than usual
- f. Giving more food than usual
- g. Giving warm juice of ginger mixed with honey
- h. See the child for fast breathing and chest in-drawing if so take the child to the hospital.
- i. Others (specify)-----

15. During the course of treatment, what are the danger signs that warn you to consult the FCHV/health personnel immediately?

- a. Fast/difficult breathing
- b. Chest in-drawing
- c. Becoming more serious
- d. Others (specify)

**A part of Annex 1:  
Nepal Red Cross Society, District Health Office and  
Save the Children US**

A Rapid Survey Questionnaire regarding **mothers**/caregivers' management of Diarrhea with  
under five year children.

District: -----	VDC: -----	Ward #: -----	Date: -----
Full name of FCHV -----		Education: -----	
No of diarrhoeal cases seen in last month: ----- .			
Mother/Caregiver's age (Years):-----		Caste:-----	Education:-----class passed.
Relationship with the child: -----			
Child's age: (In months)------			
Name of Interviewer: -----		Signature:-----	
Name of Supervisor: -----		Signature: -----	

**Instruction:**

**Section A is questions on pneumonia; section B is on diarrhea and section C for both pneumonia and diarrhea.**

**Ask Section A and Section C to the mother/caregiver with a child with pneumonia treated by Female Community Health Volunteer (FCHV) .**

**Ask Section B and Section C to the mother/caregiver with child with diarrhea treated by FCHV.**

<b>B. Questionnaire related to Diarrhea</b>
---

1. Did your child (Name of the child) have diarrhea in the last 2 weeks period?

a. Yes

b. No  to Section A and C. .

2. During (name of child)'s diarrhea did you/his or her mother breast-feed or feed the fluid?

a. As usual

b. More than usual

c. less than usual

f. Others specify -----

3. When the child has diarrhea what do you give at home?

a. Give plenty of fluid frequently

b. Give plenty of food frequently

- c. Give ORS/Jeevan Jal solution frequently
- d. Take the child to health post /health facility if did not get better
- e. Stop giving food
- f. Stop giving fluid
- f. Others (specify)-----

4. Can you tell me what did the FCHV tell you about preparation of ORS solution and how are you preparing?

- a. Wash hands
- b. Clean the utensils (dekchi with cover)
- c. Measure six glasses of clean drinking water and pour in a clean dekchi
- d. Mix Jeevan Jal/ORS well in water
- e. Feed the child frequently
- f. Keep the mixture covered
- g. Keep the solution up to one day only.
- h. If the child vomits, give the fluid again after 10 minutes
- i. Breast feed the babies as and when demanded in plenty

5. Do you remember, what important 3 home rules have you been told to do by the FCHV (Name of FCHV)during diarrhea?

- a. Giving more fluid than usual
- b. Giving more food than usual
- c. Take the child to FCHVs /health facility if did not get better or becoming worse
- d. Others (specify)-----

6. What did you give to the child (Name of child) during diarrhea?

- a. Jeevanjal
- b. water only
- c. Soap of dal
- d. rice water (MAAD)
- e. others specify -----

7. When the diarrhea has decreased how do you feed the child?

- a. Give frequent feed to the child
- b. Provided more food than usual
- c. Provide more nutritious food

d. Others (specify)

8. What are the danger signs that warn you to consult the FCHV/health personnel immediately during the diarrhea?

a. Blood in stool

b. unable to drink or eat

c. Lethargy or weakness

d. too much thirsty

e. becoming serious

f. sunken eyes

g. Others (specify)-----

A part of Annex 1

**Nepal red cross society, district health office and save the children,  
Nuwakot**

**C. Questionnaire common to Pneumonia and diarrhea**

1. How was the FCHV's approach when you visited for treatment of your child (Name of the child)?

(a) Polite	
(b) Simple	
(c) Friendly /Respectful	
(d) Unfriendly and Rude	
(e) Cooperative	
(f) Explain well about the condition of child	
(g) Given me time to ask her	
(h) Listen well to me	
Others (specify)----	

2. Did you understand everything she advised you?

a. Well understood

b. Mostly understood

c. Some

d. Never

e. Other (specify)-----

3. How do you find her advice/teaching?

a. Clear and simple

b. Confusing

c. Boring

e. Difficult to understand

f. Other (specify)-----

4. Are satisfy with advise and treatment given by FCHV (Name of FCHV)?

- a. Yes  If yes, why -----
- b. No  If no, why -----
- c. Not so bad and not so good

5. Would you like to consult her again if your child get sick?

- a. Yes
- b. No  If no, why -----

6. Would you like to refer to her for services to other mothers/caregivers if their child get sick?

- a. Yes
- b. No

7. When your child (Name of the child) has/had diarrhea/pneumonia whom did you first contact/consult?

- a. Health workers in hospital
- b. Health post staff
- c. Pharmacists
- e. Village health workers
- f. Traditional healers
- g. T.B.A
- h. Neighbors/friends/relatives
- i. Others (Specify)

## A part of ANNEX 1 Observation Checklist for FCHVs

<b>Name of the FCHV no.</b>	<b>age</b>	<b>education</b>	<b>VDC</b>	<b>Ward</b>
	<b>Name of interviewer-----</b>		<b>Date</b>	

Assessing the performance of FCHVs in relation to assessing, treating and counseling for pneumonia and diarrhea

**(Ask the FCHV to invite a child and ask her to assess, classify, treat the child with diarrhea/ pneumonia, if it is not possible find a child under five and ask to do by simulation (it would be better to have two different current cases of ARI and diarrhea) then answer (tick) the following questions .**

Did the FCHV managed the ARI/pneumonia cases by

**Asking:**

Age of the child	<input type="text"/>
Duration of cough	<input type="text"/>
Can the child able to drink or suck the breast	<input type="text"/>
Is the child difficult to make awake	<input type="text"/>

**Counting, seeing and measuring:**

Count the Respiratory rate per minute by using timer properly	<input type="text"/>
See for chest in-drawing	<input type="text"/>
See the child for severe malnutrition	<input type="text"/>

**Measure for fever or low body temperature**

**Making classification correctly:**

Is it appropriate according to the age of the child and sighs and symptoms?

**Giving the Medicines**

Did she gave appropriate dose of antibiotics/advice according to the classification

**Counseling the care taker on**

Appropriate home care to be given to the child	<input type="text"/>
Proper dose and course of medicines as appropriate	<input type="text"/>
Accurate Follow up visits for the child	<input type="text"/>

**Use of IEC materials**

<b>Use of classification card</b>	<input type="text"/>
Use of home therapy card	<input type="text"/>

**Recording**

Is she recording appropriately on appropriate forms

**Did the FCHV managed the Diarrhea by**

**Asking:**

Age of the child   
Duration of diarrhea   
Can the child able to drink or suck the breast   
Is the child has blood in stool   
Is the child has vomiting

**Seeing and measuring**

See for weakness,   
thirsty and   
tear   
See for sunken eyes   
Measure for skin pinch

**Provide the appropriate therapy**

Did she gave the Jeevanjal or ORS to the child   
Did she advice to give the Jeevanjal or ORS to the child

**Counseling the care taker on**

Three home rules -   
- Plenty of fluids than usual,   
- Frequent food more than usual   
- Ask when to return immediately (if the child developed danger sings)

**Preparation of Jeevanjal or ORS**

**Annex 2.**  
**The name list of CBAC Trained FCHV**

SN #	Name	VDC	Types FCHV	
			Treatment	Referrer
1.	Shreemaya Tamang	Salme Wd #1	✓	
2.	Tulku Tamang	" 2	✓	
3.	Nirmala Tamang	" 3	✓	<b>1</b>
4.	Fulkumari Lame	" 4	✓	
5.	Khaju Tamang	" 5	✓	
6.	Devim B K.	" 6	✓	
7.	Dawamaya Ghale	" 7	✓	
8.	Kanchi Maya	" 8	✓	
9.	Premkumari Tamang	" 9	✓	<b>2</b>
10.	Surya Maya Tamang	Bountang Wd #1	✓	
11.	Dhanakumari Tamang	" 3	✓	
12.	Bangjom Tamang	" 4	✓	
13.	Chari Maya Tamang	" 5	✓	
14.	Kanya Kumari Tamang	" 6	✓	<b>3</b>
15.	Puspa Tamang	" 7	✓	
16.	Pasang Tamang	" 8	✓	
17.	Namo Tamang	" 9	✓	
18.	Min Kumari Tamang	„ 2	✓	
19.	Sanu Maya Ghale	Bharsunchet Wd #1	✓	
20.	Mina Kumari Ghale	" 2	✓	<b>4</b>
21.	Bishnu Maya Ghale	" 3	✓	
22.	Maya Ghale	" 4	✓	
23.	Hari Maya Ghale	" 5	✓	
24.	Khech Maya Tamang	" 6	✓	
25.	Kumari Tamang	" 7	✓	<b>5</b>
26.	Lal Maya Tamang	" 8	✓	
27.	Jan Kumari Simkhada	" 9	✓	
28.	Suku Maya	Kimtang 1	✓	
29.	Ratna Tamang	" 3	✓	
30.	Phul Maya Tmanang	" 2	✓	
31.	Manju Tamang	" 4	✓	<b>6</b>
32.	Buddhi Maya	" 5	✓	
33.	Subarna	" 6	✓	
34.	Nima Dolma	" 7	✓	

35.	Sunita Ghale	" 8	✓	
36.	Sun Maya Tamang	" 9	✓	
37.	Manita Tamang	Deurali 1	✓	<b>7</b>
38.	Manjom Tamang	" 3	✓	
39.	Fulmaya Tamang	" 2	✓	
40.	Kanya Kumari Tamang	" 4	✓	
41.	Samita Tamang	" 5	✓	
42.	Sam Maya Tamang	" 6	✓	<b>8</b>
43.	Patali Tamang	" 7	✓	
44.	Chhiring Jom Tamang	" 8	✓	
45.	Surya Maya Tamang	" 9	✓	
46.	Ishori Rokka	Suryamati- 1	✓	
47.	Parbati Thapaliya	Suryamati-2	✓	
48.	Pumfa Pantha	Suryamati-3	✓	<b>9</b>
49.	Laxmi Rai	Suryamati-4	✓	
50.	Mithu Rai	Suryamati-5	✓	
51.	Sarsowati Rai	Suryamati-7	✓	
52.	Sabita Rai	Suryamati-6	✓	
53.	Manish Nepali	Suryamati-8	✓	<b>10</b>
54.	Minu Silwal	Suryamati-9	✓	
55.	Padham Kumari Dangol	Chaturale- 1	✓	
56.	Sukharani Pathak	Chaturale-3	✓	
57.	Sita Tamang	Chaturale-2	✓	
58.	Chandra Kumari Sedhai	Chaturale-4	✓	
59.	Shaili Tamang	Chaturale-5	✓	<b>11</b>
60.	Shree Laxmi Tamang	Chaturale-6	✓	
61.	Sabitri Lamichane	Chaturale-7	✓	
62.	Surya Maya Dangol	Chaturale-8	✓	
63.	Kanchhi Nepali	Chaturale-9	✓	
64.	Maiya Shrestha	Chaughada-1	✓	
65.	Rinu Malla	Chaughada-2	✓	<b>12</b>
66.	Sukhalaxmi Rai	Chaughada-3	✓	
67.	Fulmati Rami	Chaughada-4	✓	
68.	Kanchhi Manadhar	Chaughada-5	✓	
69.	Rama Rai	Chaughada-6	✓	
70.	Thuli Tamang	Chaughada-7"	✓	<b>13</b>
71.	Mithu Rai	Chaughada-8	✓	
72.	Bimala Dhakal	Chaughada-9	✓	

73.	Sita Naupane	Gerkutar-1	✓	
74.	Sarsawati Giri	Gerkutar-2	✓	
75.	Kamal Pandey	Gerkhu-3	✓	
76.	Mangali Tamang	Gerkutar-4	✓	<b>14</b>
77.	Sumitra Pyakurel	Gerkutar-5	✓	
78.	Durga Shrestha	Gerkutar-6	✓	
79.	Binda Ghale	Gerkutar-7	✓	
80.	Sumitra Timilsina	Gerkutar-8	✓	
81.	Bhagwati Dhangal	Gerkutar-9	✓	<b>15</b>
82.	Bhakti Adhikari	Bhageshowori-1	✓	
83.	Bhawani Adhikari	Bhageshowori-2	✓	
84.	Ambika Kuwar	Bhageshowori-3	✓	
85.	Sudha Pyakurel	Bhageshowori-4	✓	
86.	Sannani Tamang	Bhageshowori-5	✓	
87.	Rishi Kumari	Bhageshowori-6	✓	<b>16</b>
88.	Uma Adhikari	Bhageshowori-7	✓	
89.	Til Kumari Lama	Bhageshowori-8	✓	
90.	Devaki Tamang	Bhageshowori-9	✓	
91.	Khet Kumari Pandey	Khanigoun-1	✓	
92.	Nir Kumari Kuwar	Khanigoun-2	✓	
93.	Jhamak Kumari Pandey	Khanigoun-3	✓	<b>17</b>
94.	Sumitra Pandey	Khanigoun-4	✓	
95.	Krishna Maya Shrestha	Khanigoun-5	✓	
96.	Sabitri Shrestha	Khanigoun-6	✓	
97.	Man Kumari Ghale	Khanigoun-7	✓	
98.	Sita Maya Thapa	Khanigoun-8	✓	<b>18</b>
99.	Purna Maya Thapa	Khanigoun-9	✓	
100.	Tritha Kumari Giri	Haldekalika-1	✓	
101.	Ratna Kumari Thapa	Haldekalika-2	✓	
102.	Sannani Gurung	Haldekalika-3	✓	
103.	Lila Rai	Haldekalika-4	✓	
104.	Durga Giri	Haldekalika-5	✓	<b>19</b>
105.	Krishna Kumari Giri	Haldekalika-6	✓	
106.	Bishnu Maya Tamang	Haldekalika-7	✓	
107.	Ganga Devi Dangal	Haldekalika-8	✓	
108.	Bet Kumari Lamsal	Haldekalika-9	✓	
109.	Sabitri Lamichhane	Ganeshsthan 1	✓	<b>20</b>
110.	Goma Thapa	Ganeshsthan 2	✓	

111.	Suntali Rijal	Ganeshsthan 3	✓	
112.	Yuba Kumari Poudel	Ganeshsthan 4	✓	
113.	Aina Kumari Basnet	Ganeshsthan 5	✓	
114.	Maiya Adhikari	Ganeshsthan 6	✓	
115.	Maiya Satyal	Ganeshsthan 7	✓	21
116.	Sesha Kumari Poudel	Ganeshsthan 8	✓	
117.	Ram Kumari Dhungana	Ganeshsthan 9	✓	
118.	Rama Upreti	Kharanitar-1	✓	
119.	Tika Shrestha	Kharanitar-2	✓	
120.	Ganga Shrestha	Kharanitar-3	✓	
121.	Sun Maya Shrestha	Kharanitar-4	✓	22
122.	Tamra Kumari Upreti	Kharanitar-5	✓	
123.	Mira Upreti	Kharanitar-6	✓	
124.	Seti Maya Tamang	Kharanitar-7	✓	
125.	Laxmi Khanal	Kharanitar-8	✓	
126.	Kanchhi Maya Tamang	Kharanitar-9	✓	23
127.	Kaili Tamang	Urleni-1	✓	
128.	Maya Tamang	Urleni-2	✓	
129.	Sapta Maya Shrestha	Urleni-3	✓	
130.	Asha Ojha	Urleni-4	✓	
131.	Suntali Tamang	Urleni-5	✓	
132.	Kaili Tamang	Urleni-6	✓	24
133.	Gaiji Thapa	Urleni-7	✓	
134.	Ful Maya Bhujel	Urleni-8	✓	
135.	Chitra Kumari Ojha	Urleni-9	✓	
136.	Radha Satyal	Lachyang-1	✓	
137.	Thuli Kanchhi Tamang	Lachyang-2	✓	25
138.	Deuti Tamang	Lachyang-3	✓	
139.	Gori Maya Gurung	Lachyang-4	✓	
140.	Kanchhi Maya Tamang	Lachyang-5	✓	
141.	Suku Maya Tamang	Lachyang-6	✓	
142.	Sunu Kanchhi Tamang	Lachyang-8	✓	
143.	Ram Maya Tamang	Lachyang-9	✓	26
144.	Mahili Tamang	Lachyang-7	✓	
145.	Brinda Upreti	Narjamandap-1	✓	
146.	Chandrawati Ojha	Narjamandap-2	✓	
147.	Kamala Adhikari	Narjamandap-3	✓	
148.	Kul Devi Bhandari	Narjamandap-4	✓	

149.	Krishna Kumari Dhakal	Narjamandap-5	✓	27
150.	Sabitri Khanal	Narjamandap-6	✓	
151.	Satya Devi Rijal	Narjamandap-7	✓	
152.	Yog Maya Rijal	Narjamandap-8	✓	
153.	Sarsawati Tamang	Narjamandap-9	✓	
154.	Toran Kumari Basnet	Panchakanya-1	✓	28
155.	Tul Kumair Karki	Panchakanya-2	✓	
156.	Hira Kumari Thapa	Panchakanya-3	✓	
157.	Binda Thapa	Panchakanya-4	✓	
158.	Nanda Kumari Karki	Panchakanya-5	✓	
159.	Krishna Kumari Khanal	Panchakanya-6	✓	
160.	Tulasa Adhikari	Panchakanya-7	✓	29
161.	Sita Misra	Panchakanya-8	✓	
162.	Chatra Kumari Thapa	Panchakanya-9	✓	
163.	Suntali Shrestha	Kabilash-1	✓	
164.	Kalpana Misra	Kabilash-2	✓	
165.	Kamala Aryal	Kabilash-3	✓	30
166.	Hem Kumari Mahat	Kabilash-4	✓	
167.	Januka Mahat	Kabilash-5	✓	
168.	Bishnu Maya Giri	Kabilash-6	✓	
169.	Santu Tamang	Kabilash-7	✓	
170.	Ratna Kumari Thapa	Kabilash-8	✓	
171.	Khil Kumari Thapa	Kabilash-9	✓	31
172.	Santa Karki	Raluka-1	✓	
173.	Sanu Maya Tamang	Raluka-2	✓	
174.	Thuli Kanchhi Tamang	Raluka-3	✓	
175.	Sarada Thapa	Raluka-4	✓	
176.	Gouri Devi Rimal	Raluka-5	✓	
177.	Radha Kattel	Raluka-6	✓	32
178.	Ambika Khatiwada	Raluka-7	✓	
179.	Surya Maya Tamang	Raluka-8	✓	
180.	Anjali Silwal	Raluka-9	✓	
181.	Nani Baba Bhandari	Ratmate 1	✓	
182.	Deuti Nepal	" 2	✓	33
183.	Thuli Lama	" 3	✓	
184.	Ram Maya Tamang	" 4	✓	
185.	Bhairabi Karki	" 5	✓	
186.	Binal Lama	" 6	✓	

187.	Ishowari Ghimire	“ 7	✓	
188.	Sarmila Aryal	" 7	✓	<b>34</b>
189.	Devaki Rai	" 8	✓	
190.	Sarmila Nepal	" 9	✓	
191.	Man Kumari Sapkota	Buddhasing 1	✓	
192.	Sabitri Budathoki	" 2	✓	
193.	Sangita Shrestha	" 4	✓	<b>35</b>
194.	Maili Shrestha	" 5	✓	
195.	Anita Silwal	" 6	✓	
196.	Sarsawati Lamichhane	" 7	✓	
197.	Suku Maya Tamang	" 8	✓	
198.	Radha Adhikari	" 9	✓	
199.	Indira Wasti	" 3	✓	<b>36</b>
200.	Madhu Adhikari	Taruka	✓	
201.	Sarmila Adhikari	"	✓	
202.	Shiva Robashi	"	✓	
203.	Man Kumari Darlaki	"	✓	
204.	Sunita Shrestha	"	✓	
205.	Ambika Dhakal	"	✓	<b>37</b>
206.	Rita Aryal	"	✓	
207.	Sarada Dhungana	"	✓	
208.	Parbati Pudasaini	Jiling	✓	
209.	Gyani Pudasaini	"	✓	
210.	Kamala Khatiwada	"	✓	<b>38</b>
211.	Parbati Khatiwada	"	✓	
212.	Parmila Thapa	"	✓	
213.	Parbati Bhatta	"	✓	
214.	Hom Kumari Bhatta	"	✓	
215.	Ambika Gajurel	"	✓	
216.	Mira Kumari Gajurel	"	✓	<b>39</b>
217.	Binda Nepal	Duipipal	✓	
218.	Nirmal Nepal	"	✓	
219.	Bijaya Nepal	"	✓	
220.	Dil Kumari Bhandari	"	✓	
221.	Subitri Subedi	"	✓	<b>40</b>
222.	Uma Shrestha	"	✓	
223.	Kamala Dahal	"	✓	
224.	Durga Sapkota	"	✓	

225.	Sabitri Guragai	Balkumari 1	✓	
226.	Kamala Thapa	2	✓	
227.	Sanikanchhi Shrestha	3	✓	<b>41</b>
228.	Dipa K.C.	4	✓	
229.	Sirmaya Tamang	5	✓	
230.	Ambika Thapa	6	✓	
231.	Sabitri Thapa	7	✓	
232.	Mailimaya Tamang	8	✓	
233.	Kalimaya Tamang	Thaprek 1	✓	<b>42</b>
234.	Phulmaya Tamang	2	✓	
235.	Chandra Bhawani K.C.	3	✓	
236.	Santa Karki	4	✓	
237.	Santa Kumari Shrestha	5	✓	
238.	Sannani Pandit	6	✓	<b>43</b>
239.	Santamaya Tamang	7	✓	
240.	Subhadra Kadel	8	✓	
241.	Nanimaiya Adhikari	9	✓	
242.	Kanchhi Tamang	Rautbesi 1	✓	
243.	Gitamaya Tamang	2	✓	
244.	Phulmaya B.K.	3	✓	<b>44</b>
245.	Hindu	4	✓	
246.	Phulmaya Tamang	6	✓	
247.	Setimaya B.K.	5	✓	
248.	Subhadra Acharya	7	✓	
249.	Sita Acharya	8	✓	<b>45</b>
250.	Sanu Kanchhi Tamang	9	✓	
251.	Maili Tamang	Betini 1	✓	
252.	Muisani Tamang	2	✓	
253.	Sabitri K.C.	3	✓	
254.	Tokmaya Tamang	4	✓	
255.	Sirsani Tamang	5	✓	<b>46</b>
256.	Kanchhi Tamang	6	✓	
257.	Kanchhi Tamang	8	✓	
258.	Gori Tamang	9	✓	
259.	Kanchhi Serpa	Gaunkharka 5	✓	
260.	Rinu Tamang	2	✓	
261.	Kamala Tamang	3	✓	<b>47</b>
262.	Gorimaya Tamang	1	✓	

263.	Maina Tamang	4	✓	
264.	Jamuna Tamang	7	✓	
265.	Devi Maya Tamang	Bhalche 2	✓	
266.	Dev Maya Ghale	4	✓	<b>48</b>
267.	Maya Ghale	7	✓	
268.	Mansuk Tamang	1	✓	
269.	Khujong Tamang	6	✓	
270.	Desi Maya Ghale	3	✓	
271.	Mangali Maya Ghale	8	✓	
272.	Poma Rani Tamang	5	✓	<b>49</b>
273.	Samden Tanamg	9	✓	
274.	Tulasi Devi Bhatta	Fikuri 6	✓	
275.	Aaiti Maya Tamang 'A'	7	✓	
276.	Padam Kumari Tamang	4	✓	
277.	Buddhi Maya Tamang	1	✓	<b>50</b>
278.	Seti Pyakurel	2	✓	
279.	Dhanu Maya Tamang	3	✓	
280.	Sangita Neupane	9	✓	
281.	Gun Devi Dhungel	5	✓	
282.	Kamala Ojha	6	✓	
283.	Aasha Maya Tamang	Manakamana 1	✓	<b>51</b>
284.	Thuli Maya Tamang	5	✓	
285.	Lal Maya Lama	3	✓	
286.	Sakali Gurung	4	✓	
287.	Risang Lama	2	✓	
288.	Chhantar Tamang	6	✓	
289.	Tuljom Tamang	7	✓	<b>52</b>
290.	Parbati Bhatta	9	✓	
291.	Radhika Bhatta	8	✓	
292.	Maiya Aacharya	Kaule 1	✓	
293.	Harimaya Tamang	2	✓	
294.	Phukudolma Tamang	3	✓	<b>53</b>
295.	Tareli Maya Tamang	4	✓	
296.	Harimaya Tamang	5	✓	
297.	Dhan Kumari Tamang	6	✓	
298.	Sita Waiba	7	✓	
299.	Musuro Tamang	8	✓	
300.	Niladevi Bhatta	9	✓	<b>54</b>

301.	Maiti Tamang	Tupche 7	✓	
302.	Parbati Tamang	4	✓	
303.	Laxmi Adhikari	3	✓	
304.	Devaki Nepal	2	✓	
305.	Ruku Sapkota	1	✓	<b>55</b>
306.	Sita Bogati	9	✓	
307.	Kamala Rijal	6	✓	
308.	Sita Acharya	8	✓	
309.	Deuti Paudel	1	✓	
310.	Mandodari Acharya	Samundratar 1	✓	
311.	Shivamaya Tamang	3	✓	<b>56</b>
312.	Sita Kumari Thapa	4	✓	
313.	Thuli Tamang	5	✓	
314.	Santumaya Tamang	6	✓	
315.	Rukmani Thapa	7	✓	
316.	Dil Kumari Shrestha	7	✓	
317.	Binda Shrestha	8	✓	<b>57</b>
318.	Sanu Maya	9	✓	
319.	Amarawati Shrestha	Sundaradevi 1	✓	
320.	Ram Kumari Mainali	3	✓	
321.	Tikadevi Adhikari	4	✓	
322.	Gayatri Bhandari	5	✓	<b>58</b>
323.	Tek Kumari Bhandari	6	✓	
324.	Kamala Bhandari	7	✓	
325.	Phulmaya Tamang	8	✓	
326.	Nakkali Tamang	9	✓	
327.	Satyarupa Shahi	Shikarbesi 1	✓	
328.	Santadevi Tamang	2	✓	<b>59</b>
329.	Nil Kumari Pandit	3	✓	
330.	Chandrika Budhathoki	3	✓	
331.	Kumari Tamang	4	✓	
332.	Saraswoti Situla	5	✓	
333.	Binda Devi Khadka	6	✓	<b>60</b>
334.	Min Kumari Pandit	6	✓	
335.	Toksani Tamang	7	✓	
336.	Bijuli Tamang	8	✓	
337.	Bisnumaya Tamang	9	✓	
338.	Risang Tamang	Ghyangphedi 2	✓	

339.	Putali Tamang	4	✓	<b>61</b>
340.	Serfole Tamang	3	✓	
341.	Sitama Tamang	5	✓	
342.	Muisani Tamang	7	✓	
343.	Pasang Serpa	9	✓	
344.	Sarswoti Bogati	Kalyanpur 1	✓	
345.	Binda Shrestha	3	✓	<b>62</b>
346.	Debaki Khadka	2	✓	
347.	Kaili Shrestha	5	✓	
348.	Chini Thapa	6	✓	
349.	Binda Tamang	9	✓	
350.	Dil Kumari Tamang	4	✓	<b>63</b>
351.	Deb Kumari Ojha	7	✓	
352.	Chandra Maya Tamang	8	✓	
353.	Parbati Dangol	Samari 1	✓	
354.	Jirimando Tamang	2	✓	
355.	Kanchhi Maya Tamang	3	✓	
356.	Hem Kumari Sapkota	4	✓	<b>64</b>
357.	Kali Tamang	5	✓	
358.	Sanu Maili Tamang	6	✓	
359.	Rita Thapa	7	✓	
360.	Rita Maya Tamang	8	✓	
361.	Masino Tamang	9	✓	<b>65</b>
362.	Mansang Tamang	Khadgabhanjyang 1	✓	
363.	Sabitri Rimal	2	✓	
364.	Sanu Maya Tamang	3	✓	
365.	Bhagawati Adhikari	4	✓	
366.	Prem Maya Shrestha	5	✓	
367.	Usha Rimal	6	✓	<b>66</b>
368.	Chot Kumari Badhal	7	✓	
369.	Sabitri Adhikari	8	✓	
370.	Radhika Shrestha	9	✓	
371.	Bhawani Aryal	Charghare 8	✓	
372.	Goma Rimal	2	✓	
373.	Chandra Kumari Dhugana	5	✓	<b>67</b>
374.	Subhadra Bhatta	4	✓	
375.	Kamala Rijal	6	✓	
376.	Ful Maya Tamang	7	✓	

377.	Sita Rimal	1	✓	
378.	Nirmaya/Gyanu Tamang	3	✓	<b>68</b>
379.	Gita Adhikari	9	✓	
380.	Bamala Tamang	Dangsing 1	✓	
381.	Kamal Kumari Tamang	2	✓	
382.	Suku maya Tamang	3	✓	
383.	Som Maya Tamang	4	✓	
384.	Suki Jom Tamang	5	✓	<b>69</b>
385.	Bhagawati Adhikari	6	✓	
386.	Radhika Lamichhane	7	✓	
387.	Gita Khanal	8	✓	
388.	Apsara Ghimire	9	✓	
389.	Masino Maya Tamang	Gorsyang 1	✓	<b>70</b>
390.	Tulku Maya Tamang	2	✓	
391.	Chaali Maya Tamang	3	✓	
392.	Devaki Ghimire	4	✓	
393.	Chanamati Tamang	5	✓	
394.	Lila Devi Khatiwada	6	✓	
395.	Rudra Kumari Timilsina	7	✓	<b>71</b>
396.	Ful Maya Tamang	8	✓	
397.	Dal Maya Tamang	9	✓	
398.	Radhika Acharya	Chauthey 1	✓	
399.	Ujali Tamang	2	✓	
400.	Thuli Maiya Tamang	3	✓	
401.	Urmila Bajgain	4	✓	<b>72</b>
402.	Manjari Dhungana	5	✓	
403.	Sanu Maiya Tamang	6	✓	
404.	Ganga Basnet	7	✓	
405.	Radhika Rai	9	✓	
406.	Parbati Mudbari	Kumari 1	✓	<b>73</b>
407.	Lila Mudbari	2	✓	
408.	Nanu Mudbari	3	✓	
409.	Maiya Pudasaini	4	✓	
410.	Hira Neupane	6	✓	
411.	Sabitri Gajurel	7	✓	
412.	Devaki Timilsina	8	✓	<b>74</b>
413.	Rupa Sapkota	9	✓	
414.	Binda Ghimire	Okarpauwa 1	✓	

415.	Bachala Balami	2	✓	
416.	Kanchhi Maya Lama	3	✓	
417.	Bimala Ghimire	4	✓	<b>75</b>
418.	Maili Tamang	5	✓	
419.	Sanu Maya Lama	6	✓	
420.	Ambika Nepali	7	✓	
421.	Kabi Balami	8	✓	
422.	Laxmi Lama	Kakani 1	✓	
423.	Thuli maya Lama	2	✓	<b>76</b>
424.	Mithu Devi Shrestah	3	✓	
425.	Suntali Maya Lama	5	✓	
426.	Asta Maya Lama	6	✓	
427.	Bhakta Kumari Lama	8	✓	
428.	Shobha Gurung	9	✓	
429.	Nita Pandey	Madanpur 1	✓	<b>77</b>
430.	Saraswoti Pandey	2	✓	
431.	Singita Adhikari	3	✓	
432.	Prem Kumari Silawal	4	✓	
433.	Thuli Maya Lama	5	✓	
434.	Sita Raila	6	✓	<b>78</b>
435.	Makhamaii Lama	7	✓	
436.	Kainli Maya Lama	8	✓	
437.	Shanta Lamichhane	9	✓	
438.	Phool Kumari Bhatta	Belkot 1	✓	
439.	Ambika Pantha	2	✓	
440.	Shubhadra Poudel	3	✓	<b>79</b>
441.	Gyanu Sigdel	4	✓	
442.	Phool Maya Tamang	5	✓	
443.	Sujata Tamang	7	✓	
444.	Thuli Maya Tamang	7	✓	
445.	Binda Sapkota	9	✓	<b>80</b>
446.	Kamala KC	Talakh 1	✓	
447.	Urmila KC	2	✓	
448.	Sun maya Sherestha	4	✓	
449.	Pan Maya Gurung	6	✓	
450.	Jayanti KC	5	✓	
451.	Man Maya Tamang	7	✓	<b>81</b>
452.	Pampha Tamang	8	✓	

453.	Yab Kumari Shereshta	9	✓	
454.	Tulasha Adhikari	3	✓	
455.	Kaili Tamang	Chhap 2	✓	
456.	Janaki Pandit	1	✓	
457.	Kamala Bhandari	3	✓	82
458.	Sanu Kanchhi Tamang	4	✓	
459.	Shree maya Tamang	5	✓	
460.	Padam Kumari Budhathoki	6	✓	
461.	Budha laxmi Sherestha	7	✓	
462.	Chini Maya Tamang	8	✓	83
463.	Phool Maya Tamang	9	✓	
464.	Saili Tamang	Samundradevi 1	✓	
465.	Bimala Tamang	2	✓	
466.	Subhadra Tamang	3	✓	
467.	Kumari Tamang	4	✓	
468.	Sabitri Bakhati	5	✓	84
469.	Santa Maya Thapa	7	✓	
470.	Phool Maya Tamang	8	✓	
471.	Kali Tamang	9	✓	
472.	Damayanti Mahat	6	✓	
473.	Ananta Kumari Gurung	Sikre 1	✓	85
474.	Sanu kumari Gurung	2	✓	
475.	Ram Devi Sherestha	3	✓	
476.	Krishna Kumari Gurung	4	✓	
477.	Sanu Maya Tamang	5	✓	
478.	Kanchhi Maya Tamang	6	✓	
479.	Tulasha Khadka	7	✓	86
480.	Bhagwati Budhathoki	8	✓	
481.	Chini Maya Thapa	9	✓	
482.	Laxmi Thapaliya	Bhadrutar 1	✓	
483.	Thuli Maya Tamang	2	✓	
484.	Durga Sitaula	3	✓	
485.	Sabitra Sitaula	4	✓	87
486.	*Bina Sherestha	5	✓	
487.	Kanchhi Thapa	6	✓	
488.	Ek Kumari Sherestha	7	✓	
489.	Anita Magar	8	✓	
490.	Maiya Pandit	9	✓	88
491.	Nirmala Khatiwada	Mahakali 1	✓	
492.	Rama Khatiwada	2	✓	

493.	Mina Ghale	3	✓	
494.	Sabitra Poudel	4	✓	
495.	Indira Ahikari	5	✓	
496.	Sukul Deuja	6	✓	<b>89</b>
497.	Urmila Khadka	7	✓	
498.	Lalata Bhandari	8	✓	
499.	Seti Tamang	9	✓	
500.	Indra Kumari Poudel	Likhu 1	✓	
501.	Laxmi Bhakta Tamang	2	✓	<b>90</b>
502.	Sita Tamang	3	✓	
503.	Ramri Tamang	4	✓	
504.	Devsani Tamang	5	✓	
505.	Dil Maya Tamang	6	✓	
506.	Hari Maya Bhandari	7	✓	
507.	Rita Tamang	8	✓	<b>91</b>
508.	Shanti Tamang	9	✓	
509.	Manju Tamang	Sunkhani 1	✓	
510.	Bishnu Gurung	2	✓	
511.	Nani Maiya Lama	3	✓	
512.	Bir Maya Tamang	4	✓	
513.	Laxmi Pandey	5	✓	<b>92</b>
514.	Subhadra Pandey	6	✓	
515.	Durga pandey	7	✓	
516.	Suntali Dangol	8	✓	
517.	Mithu Pandey	9	✓	
518.	Laxmi Tamang	Thanapti 1	✓	<b>93</b>
519.	Kamala Tamang	2	✓	
520.	Bhagwati Silwal	3	✓	
521.	Shanti Silwal	4	✓	
522.	Subhadra Adhikari	5	✓	
523.	Bhagawati Dangol	6	✓	
524.	Subhadra Silwal	8	✓	<b>94</b>
525.	Bharat Kumari thapa	9	✓	
526.	Ambika Sitaula	7	✓	
527.	Chini Maya Dangol	Thansing 1	✓	
528.	Shanta pandey	2	✓	
529.	Kamala Bhandari	3	✓	<b>95</b>
530.	Kalpana Sherestha	5	✓	
531.	Bhgabati Thapa	6	✓	
532.	Bimala Bhandari	4	✓	

533.	Ambika Dhital	7	✓	
534.	Nirmala Lamichhane	8	✓	
535.	Laxmi lama	9	✓	<b>96</b>

Total FCHVs 1010, out of which 535 are cotrim seller and 475 are referrer  
Note: All FCHVs has received 2 days CDD training.

**ATTACHMENT F**

**Operation Research on the performance of Maternal Child  
Health Workers in Nuwakot District**

FINAL Assessment Report on  
MNC and OFAC Intervention Program

**Submitted to:  
Save the Children US  
Maharajgunj, Kathmandu, Nepal**

**Submitted by:  
Narbada Thapa**  
Consultant, Epidemiologist  
May, 2003

# CONTENTS

	Page
ABBREVIATIONS	
<b>Chapter 1: INTRODUCTION</b>	
1. Introduction	1
2. Research Question	1
3. Program Objective	1
4. Current study objectives	2
5. Study Hypothesis	2
<b>Chapter 2: METHODOLOGY</b>	
1. Study Design	3
• Quantitative	
• Qualitative	
2. Study area	3
3. Study population and sampling	4
4. Study Variables	5
5. Data collection instruments	5
6. Data collection Procedure and field mobilization	6
7. Data management and analysis	6
8. Ethical consideration	7
<b>Chapter 3: RESULTS</b>	
3.1 Socio-demographic background of MCHW	9
3.2 MCHW's knowledge on	
1. ANC components	10
2. Pregnancy danger signs and referral	10
3. Labor/Delivery danger signs and referral	11
4. Postpartum danger signs and referral	12
5. Neonatal danger signs	12
6. Management of third stage labor, immediate newborn care and postnatal care	13
3.3 Clinical skill of MCHW on:	
1. Basic skill	14
2. Antenatal checkup	14
3. Delivery procedure	15
4. Immediate newborn care	16
5. PNC service and newborn care	16
6. PPH management	17
3.4 MCHWs service practice on MNC/OFAC	18
3.5 Usefulness and completeness of BEOC Kit	22
3.6 Problem faced by MCHWs in rendering MNC and OFAC services	23
3.7 Findings from exit interview	

1. Availability and accessibility of service	25	
2. Satisfaction level of MWRA with service provided by MCHW	25	
3.8 Data analysis from regular monitoring records		
1. Overall knowledge assessment of MCHW	26	
2. Case load and referral cases	26	
3. Record keeping status	29	
3.9.1 Results from Focus Group Discussion	30	
3.9.2 Results from In-depth interview	34	
<b>Chapter 4. GENERAL CONCLUSION AND RECOMMENDATION</b>		
4.1 Summary of key findings and conclusion	40	
4.2 Summary findings according to OR protocol	43	
4.3 Recommendation	44	
<b>Reference:</b>	46	
<b>APPENDICES</b>		
	Map of the study area	48
APPENDIX I	Name of the study team and interviewers	49
APPENDIX II	Time table of field work in Nuwakot	50
	Mobilization of the study team to the field	
APPENDIX III	Interview questionnaire for MCHWs	53
APPENDIX IV	RH/BEOC kit content	60
APPENDIX V	Exit-interview questionnaire	61
APPENDIX VI	Focus group guideline	66
	In-depth guideline	
APPENDIX VII	Observation checklist for clinical skill test	
	- VII : Antenatal care	69
	- VIII: Normal delivery	73
	- IX : Immediate Newborn Care	78
	- X : Management of PPH	81
	- XI : Postnatal care	84
APPENDIX XII	Graphical presentation	86

## ABBREVIATIONS

AHW	=	Auxiliary Health Worker
ANC	=	Antenatal Care
ANM	=	Auxiliary Nurse Midwife
BCC	=	Behavior Change and Communication
BEOC	=	Basic Essential Obstetric Care
CS	=	Child survival
CS-XV	=	Child survival 15
CHW	=	Community Health Worker
DHO	=	District Health Officer/Office
EOC	=	Essential Obstetric Care
FCHV	=	Female Community Health Volunteer
FGD	=	Focus Group Discussion
F/P	=	Family Planning
HC	=	Health Coordinator
HP	=	Health Post
HA	=	Health Assistant
MNC	=	Maternal and Newborn Care
MCH	=	Maternal and Child Health
MCHW	=	Maternal and Child Health Worker
MWRA	=	Married Women of Reproductive Age
NRCS	=	Nepal Red Cross Society
OFAC	=	Obstetric First Aid Care
PHN	=	Public Health Nurse
PNC	=	Post Natal Care
RH	=	Reproductive Health
RHO	=	Reproductive Health Officer
SN	=	Staff Nurse
SHP	=	Sub Health Post
TBA	=	Traditional Birth Attendant
VDC	=	Village Development Committee
VHW	=	Village Health Worker
NA	=	Not available

# Chapter 1

## Introduction

### 1. Introduction

Although Nepal has made progress in a number of health indicators, the neonatal mortality rate (39/1000 live births) is the third highest in the world, and Nepal has the world's fourth lowest percentage of births attended by skilled personnel. Nearly 88% of all births occur at home in the absence of a skilled health provider. In addition, Nepal has one of the world's highest maternal mortality rates, with estimates ranging from 539 to 1500 maternal deaths per 100,000 live births. Despite a comprehensive effort of the Government, the overall coverage of ANC, delivery and PNC services remain low (42.7%, 15.0% and 14.4%, respectively), and the number of maternal deaths is suspected to be very high- estimated at one death every two hours (1, 2). Other critical indicators of maternal health, including rates of malnutrition, anemia, night blindness, fertility, age at first pregnancy, and birth intervals are among the worst in the world (2).

Located in the hills just north of Katmandu, Nuwakot district was selected as a "Safe Motherhood District" in 1994. The district is home to 44,500 children under age five and 56,000 married women of reproductive age. Tamang, one of most disadvantaged ethnic groups in the country, constitute the largest ethnic group in the district. Since October 1999, Save the Children US (SC/US) has been implementing the Child Survival 15 Project (CS 15) in partnership with the Nepal Red Cross Society (NRCS) and the District Health Office (DHO) in Nuwakot district. The overall goal of the program is a sustained reduction of under five and maternal mortality among the most disadvantaged communities in the district through maternal and child health related interventions. The four-year project (October 1999- September 2003) covers all 61 Village Development Committees (VDCs).

The project has been enhancing the capacity of health workers, especially local women health workers of the existing MoH structure. As part of the program, a total of 53 Maternal and Child Health Workers (MCHWs) from 53 Sub Health Posts (SHPs) had received 45-day refresher training. Out of the 53 trained MCHWs, two transferred out to other district and 51 MCHWs (96%) are continuously working at their respected SHP after the 45-day refresher training. Therefore only 51 MCHWs have received subsequent training and ongoing supportive supervision with following expected outcomes:

- OFAC available through RH trained MCHWs at 70% of SHPs.
- 70% of trained MCHWs competent in MNC/OFAC.
- 200% increase in MCHWs contact for antenatal care, deliveries and postpartum. (Baseline: ANC - 3.75 contacts per month; deliveries - 0.38 per month and PNC - 1.25 per month).

This operations research was undertaken to evaluate the results and effectiveness of the program inputs.

## **2. Research Question**

Can the quality, availability, and utilization of Maternal and Newborn Care (MNC) and Obstetric First Aid Care (OFAC) be improved in the hills of Nepal by training and supporting MCHWs to provide these services?

## **3. Program Objectives**

1. To document results of training and supporting MCHWs in RH and OFAC based on initial draft of MoH, MCHW RH curriculum.
2. To test the new MoH RH curriculum in a remote hill districts and contribute the lesson learned and experience in refining the standard RH curriculum

## **4. Specific Objectives of the current study**

1. To assess the knowledge and practice of the MCHWs in providing MNC and OFAC services in Nuwakot district.
2. To determine the improvement in quality and utilization of MNC and OFAC services provided by MCHWs after receiving refresher training and support by CS-15 program (based on new MOH, MCHW, RH curriculum).

## **5. Hypothesis**

Training and support of MCHWs in MNC, OFAC and effective BCC activities will increase the availability, utilization and quality of MNC and OFAC services in Nuwakot District.

# Chapter 2

## Methodology

### 1. Research Design

A descriptive cross-sectional research design based on the qualitative and quantitative technique was used to determine the improvement of MNC and OFAC services provided by MCHWs after refresher training and support.

#### 1a. Quantitative (cross-sectional study):

- ***Exit interview*** : Married Women of Reproductive Age (MWRA) who came to SHPs for ANC/PNC or Newborn care were interviewed to identify the quality of service provided by MCHWs and service satisfaction level in that particular day.
- ***Interview***: MCHWs were interviewed to assess the knowledge, practice and hindering/supporting factors in providing MNC and OFAC service in the community.

#### 1b. Qualitative study:

***In-depth study (key informant information)***: Community leaders, TBAs, AHWs, and staff nurses in the community were interviewed to identify the usefulness of the program, its strength and weakness and service seeking practice among MWRA of their community.

***Focus group discussion (FGD)***: Focus group discussions were conducted among the service (MNC and OFAC) user and non-user groups of MWRA. Discussion was mainly concentrated on the availability, accessibility, utilization and quality care provided by MCHWs. Issue on client satisfaction and sustainability was also discussed.

***Non-participatory observation***: To determine the MCHW's skill in providing MNC and OFAC, performance evaluation was made in their setting (actual working SHP).

### 2. Study area

In Nuwakot district there are a total of 53 SHPs in 61 VDCs. CS-15 program has implemented in all VDCs in two phases since 1999. As a part of CS-15 program MCHWs from all SHPs were provided refresher training on MNC and OFAC. To assess the effectiveness of the program, 14 SHPs were selected as a potential study area in current study. Simple random technique was applied for the selection of SHPs.

### 3. Study population and sampling

#### 3.1 MCHW:

Through the CS-15 a total of 53 MCHWs from 53 SHPs had received 45-days RH refresher training. Out of the 53 trained MCHWs, two transferred out to other districts. Only 51 MCHWs have received subsequent training and ongoing supportive supervision.

For this study a total of 36 MCHWs (70%) were interviewed and observed for the performance evaluation. MCHWs who were not available or busy in MNT program at the time of data collection were not included in the study. Among 36 MCHWs, 14 were interviewed and observed for the skill test in their work place (SHP) and other 22 MCHWs were requested to come to the nearest SHP or NRCS for an interview and skill test.

#### 3.2 MWRA:

**Exit interview: MWRAs** who came to the selected 14 SHPs for the purpose of ANC, Delivery, PNC, or newborn care were the potential subjects for the exit interview. They were interviewed immediately after receiving the service in SHPs. In some of the SHPs desired number of MWRA couldn't be achieved. Among 74 expected numbers of MWRAs in 14 SHPs, only 58 came for the checkup. Thus to increase the number of sample additional 20 MWRA were interviewed and checked in the ANC clinic of Trisuli hospital. MCHWs who came to the NRCS for the interview were assigned the ANC cases and checked for performance skill.

**Focus group discussion:** A total of 12 FGD (7 users group and 5 non-users group), were conducted among MWRAs in the 6 subset VDCs of the study SHPs. To maintain the homogeneity of the exposure in population, FGDs among users and non-users were conducted separately in the same VDC. There were a total of 6- 10 participants in each FGD and community members help to select the participants within the given criteria. Participants were married women of reproductive age (15-49 yrs), residing in the same area of SHPs at least for 6 months, have last childbirth within the 5 years or currently pregnant.

**Clinical Skill Assessment:** A total of 88 clinical skill performances of 36 MCHWs were observed. Among them 41 were observed in SHPs during providing MNC services to the MWRA and newborn, and 47 procedures were observed on clients at Trisuli hospital and in simulated cases. Simulation was done mostly for the delivery, PPH management and immediate newborn care. All MWRA who came to the SHP for ANC, PNC, or Newborn care on data collection day were included for the interviews and tested the MCHWs' clinical skill on at least two procedures while providing service to the MWRA in each SHPs.

#### 3.3 Key informants:

A total of 15 key informants were interviewed. They were selected from the different VDCs in the basis of important and informative person in the community. Key informants were VDC leaders, TBAs, Staff nurse/AHW etc.

## Overall summary of study population and data collection method

Data collection method	Study population	Study area	total number
Exit interview	MWRA	SHP Hospital	58 20
Interview	MCHWs	Study SHPs NRCS/hospital	14 22
FGD	MWRA	Community	7 user 5 non-user
In-depth interview	TBA Community leader S/N and AHW	Community	15
Skill test- checklist	MCHWs	SHP Hospital Simulation at NRCS	Total 88

## 4. Study Variables:

### 4.1 Independent variables

- a. Refresher training on MNC and OFAC to the MCHWs
- b. Supplying of BEOC kit and supportive supervision by SC-15 staffs.
- c. BCC activities promoting the use of MCHWs MNC and OFAC.

### 4.2 Dependant variables

1. Knowledge and skill of MCHWs in MNC and OFAC service
2. Case load of ANC, delivery, PNC and newborn care
3. Provision of MNC and OFAC service in sub-health post and community such as providing ANC, delivery, PNC, and newborn care service in normal situation, referral and management of complicated cases.
4. Client satisfaction and service utilization

## 5. Data collection Instruments

- a. Interviewer administered semi-structured questionnaire- MCHWs
- b. Questionnaire for exit interview – MWRA in SHP
- c. In-depth guide questionnaire, free listing – key informants (health post in-charge, community leader and TBA.
- d. Focus group guide, tape recorder, notebook and pen - MWRA
- e. Observation checklist: for clinical skill test- MCHWs performance

After finalization of tool, pilot test was done during orientation program at NRCS office of Nuwakot. Tool were pre-tested and discussed in the group and modification was done accordingly.

## **6. Data collection procedure and field mobilization**

### 1. Recruitment:

a. Team leader:	1
b. Field Coordinator:	1
c. Facilitators FGD	3
d. Note taker (FGD)	3
e. Interviewer	3
f. Logistic manager	1
g. Statistical assistant	1

The group was divided into 5 teams. Each team consisted of 3 persons in which one was from DHO or NRCS staff. The team was assigned 2-4 study areas depending on distance and terrain. They were completely responsible for FGD, in-depth interview, exit-interview and clinical skill test (observation checklist) in the assigned VDCs. The detail of group assignment is shown in appendix II.

### 2. Training of the supervisors and enumerators

One-day orientation program was conducted to the supervisors and enumerators by the research team. The enumerators were trained in the basic approach of research, technique to fill the questionnaire, conduct FGD and in-depth interview, appropriate mannerism and skills to adapt to non-judgmental attitudes during the data collection. Discussed about the simplicity and practicability of data collection tool. Practical exercise was performed on the technique of FGD, in-depth interview and interviewer administered questionnaires.

### 3. Formal permission was obtained from the districts and the target population. A letter from DHO was provided to the interviewer before departing to the community. MCHWs and Health Post In-charge was pre-informed about the program and arrival day to the SHPs.

### 4. Data collection was performed during the April 17 – 22 April.

### 5. MCHWs and FCHV helped to gather the mothers group for the FGD and key informants for the in-depth interview,

### 6. Team leader and supervisor were responsible to provide supervision and guidance to the enumerators.

### 7. Data management and analysis

All interview forms and FGD notes were reviewed for completeness by supervisors at the end of each day. After checking for the completeness, coding was done accordingly.

#### 7a. Statistics used in survey data:

To examine the distribution of variables individually and to reveal the basic structure of the findings, a descriptive statistic was calculated (mean, proportion, standard deviation etc). To check the achievement of the OR objective, finding was compared with the baseline data.

#### 7b. Qualitative data

Qualitative data were transcribed from tape to paper in the same dialect and cross checked with field notes. The transcripts were translated into English and categorized under different themes and domain according to objective of the study.

#### 8. Ethical Considerations

Since this study did not intervene in the treatment of the disease and did not involve any invasive procedure on the research participants, it had not created any strong ethical issues.

Informed consent was obtained from the all participants in the study such as MCHW, Key informant and mothers before interview and examination. Social and cultural values of the research participants was respected and considered as required. Study subjects were assured that all information would be kept confidential and would only be used for research purpose.

## Chapter 3 Results

The purpose of this chapter is to provide the readers with overall information of the study population's characteristics, knowledge and practice of MCHWs on MNC and OFAC, mother's and community's perception about the CS-15 program and MCHWs,

A total of 78 exit-interviews, 36 interviews with MCHWs, and 88 checklist of clinical skill performance were included in the quantitative analysis. Furthermore content analysis was done for the data from 12 FGDs of MWRA and 15 in-depth interviews of key informants.

Table 1 describes the distribution of study population in different targeted areas. A total of 14 SHPs were visited, 7 from 1st phase and 7 from 2nd phase intervention area. Fourteen MCHWs were interviewed in their SHP other 22 were called to the nearest SHP or NRCS. Altogether there were 12 FGD (7 user group and 5 non-user group), 15 In-depth interviews, 36 MCHWs interviews, 78 MWRA's interviews and 88 observations were made for skill assessment.

**Table 1** Distribution of study area and population

Intervention phase	Name of SHP	MCHWs		MWRA	Key informants	Key informants
		Interview	Clinical Skill Assessment (CSA)	Exit-int.	In-depth-interview	FGD
1 <sup>st</sup> phase 2001	Raluka devi	1	2	5	-	-
	Sundara devi	1	5	6	2	2
	Balkumari	1	2	4	1	-
	Chaughada	1	3	5	1	2
	Lachyang	1	2	3	-	2
	Bageshori	1	2	3	2	-
	Gerku	1	4	5	-	2
2 <sup>nd</sup> phase intervention	Kalayanpur	1	3	2	1	-
	Suryamati	1	3	5	1	-
	Fikuri	1	2	1	2	2
	Belkot	1	3	6	1	-
	Okharpauwa	1	3	2	1	-
	Ratmate	1	4	6	-	2
	Taruka	1	3	5	1	-
MCHW called to NRCS or nearest SHPs for interview and skill test		22	47	20	2 (SN)	
<b>Total</b>		<b>36</b>	<b>88</b>	<b>78</b>	<b>15</b>	<b>12</b>

*In-depth-interview: FCHV/TBA= 2, S/N= 3, TBA= 4, AHW=3, Community leader = 3*  
 In-depth interview and FGD were conducted only in the randomly selected SHP's areas.

### 3.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF MCHW

Socio-demographic characteristics of the MCHWs are summarized in Table 2. The majority of the MCHWs were belongs to Brahmin ethnic (44.4%) followed by Chhetri 25%, Newar 16.9% and Tamang/Rai/Gurung 13.9%. Almost all of them were married (97%), more than 75% have had education above secondary level and were between the age group of 23-40 yrs. The mean age was 30.1 years. There was a wide variation in work experience 3 years to 14 years with the mean of 7 years.

**Table 2. Socio-demographic characteristics of interviewed MCHWs . N=36**

Variables	Number	Percent
<u>Ethnicity</u>		
Brahmin	16	44.4
Chhetri	9	25.0
Newar	6	16.7
Tamang/Magar/Gurung	5	13.9
<u>Marital status</u>		
Married	35	97.2
Single	1	2.8
<u>Education</u>		
Secondary (8 grade)	9	25.0
High school (9-10 grade)	26	72.3
More than 10 grade	1	2.8
<b>Age</b> Mean	30.1 years	
Range	23 – 40 years	
<b>Total duration of work as MCHW</b>	7 years (3- 14 years)	

#### 3.1a Distance of MCHW's residence from SHP

There was wide variation in the length of time it took MCHWs to reach the SHP from their home, ranging from three minutes to 4 hours. The average (mean) distance was nearly one and half hours, and two third live more than 1 hour away from SHP. The distance of SHP for many MCHWs serve as a major hindrance to the availability and utilization of their services, especially for non-office hours needs such as the handling of obstetric emergencies and delivery care (Table 2a).

**Table 2a. MCHWs residence and distance from SHP. N=36**

Work details	Number	Percent
<b>MCHW's residence and working SHP</b>		
In same VDC	22	61.1
Different VDC	14	38.9
<b>Distance of SHP</b>		
Mean	1. 40 hours (3-260 minute)	
<1 hour	12	33.3
1-2 hours	14	38.9
> 2 hours	10	27.8

## 3.2 KNOWLEDGE OF MCHWS ON ANC, DELIVERY, PNC, NEWBORN CARE AND OFAC

### 3.2.1 Knowledge of MCHW about antenatal care components

Knowledge was assessed through interviews of 36 MCHWs, currently working in Nuwakot District. To assess the change in knowledge, the scores obtained from the interviews were compared to the baseline scores from Phase 1 (n=13), 1999 and Phase 2 (n=16), Feb. 2000.

Table 3 describes the knowledge of MCHW on antenatal care service components. Among 12 components listed, more than 85% of the MCHWs have mentioned 7 components, while the knowledge and current practice on other components such as teaching on birth preparedness and counseling on breast-feeding were mentioned by lower number of the MCHWs, 33% and 52%, respectively.

**Table 3. Knowledge and practice of MCHW on ANC component in SHP according to their own report**

Variables	Number	Percent
History taking	34	94.4
Head to toe examination	35	97.2
Check blood pressure	35	97.2
Measure height and weight	32	88.9
TT immunization	33	91.7
Providing Iron and folic acid	35	97.2
Teaching on nutrition and Iodine salt	31	86.0
Teaching on birth preparedness	12	33.3
Counseling on breast feeding	19	52.8
Inform about danger signs of pregnancy and delivery	26	72.2
Refer the mothers incase of danger signs	22	61.0
Make personal card of mother/ record keeping	24	66.7
<b>Mean number of correct answer</b>	<b>9.52</b>	<b>(9.52/12 = 79.3%)</b>

### 3.2.2 Knowledge on danger signs of pregnancy

MCHW's knowledge on danger signs of pregnancy is described in Table 4. The overall knowledge has increased by 23% than in baseline survey. The total average score obtained was 72% whereas it was 49% in baseline report. Although the final scores for the most obvious danger signs such as vaginal bleeding and swelling were slightly lower than the baseline, recognition of other danger signs such as anemia and excessive nausea increased significantly. Encouragingly, 92% of the MCHWs know at least 4 danger signs of pregnancy. Similarly, the overall knowledge of danger signs requiring referral also increased than the baseline knowledge (54% to 67%) (Table 5).

**Table 4. Knowledge of danger signs in pregnancy (N=36 Final)**

Danger Sign	Baseline N= 29	Final N=36
Vaginal bleeding	97%	94%
Generalized swelling (face, hands, legs and abdomen)	90%	89%
Anemia	48%	81%
Excessive nausea and vomiting	48%	72%
Jaundice	35%	58%
Diminished or no fetal movement	28%	53%
High or recurrent fever	38%	39%
High blood pressure >140/90	8%	92%
Weakness and breathing difficulties	NA	36%
Severe headache/blurred vision	NA	44%
Premature rupture of the membranes	NA	19%
<u>Know &gt;4 danger signs</u>	<b>44%</b>	<b>92%</b>
<b>Total average knowledge</b>	<b>49%</b>	<b>72%</b>

*The knowledge which were not measured in baseline data were not included in total average knowledge for the comparison purpose*

*NA= Not available*

**47% increased in knowledge on danger signs than the baseline (Formula:  $72-49*100/49$ )**

**Table 5. Referral knowledge of conditions during pregnancy N=36**

Danger Sign	Baseline	Final
Severe vaginal bleeding	93%	97%
Severe headache/blurred vision	31%	70%
Shock/unconsciousness	45%	56%
Severe abdominal pain	48%	47%
Convulsion	NA	69%
Mal presentation of fetus	NA	31%
<b>Know 3 or more referral signs</b>	<b>NA</b>	<b>86%</b>
<b>Total score %</b>	<b>54.3%</b>	<b>67.5%</b>

***24 % increased in referral knowledge during pregnancy compared to baseline.***

### 3.2.3 Knowledge on Labor/delivery danger signs

Knowledge of danger signs during labor and delivery increased, with particular increases in the recognition of convulsions (from 36% to 64%), early rupture of membranes (from 21% to 63%), and maternal distress (26% to 53%). Overall knowledge has increased by 45% than the baseline knowledge (Table 6)

**Table 6. Knowledge of danger signs of labor/delivery**

Danger Signs	Baseline	Final
Excessive vaginal bleeding	93%	97%
Prolapsed hand, leg, or cord	86%	94%
Convulsions	35%	64%
Early rupture of membranes	21%	63%
Maternal distress (exhaustion, dry mouth, fever, etc.)	26%	53%
Unconscious /shock	62%	53%
FHS <120 or >160 per minute	31%	69%
Prolonged labor >12 hours in primi and >8 hours in multigr.	38%	75%
Retained placenta (>30 min. of delivery)	28%	44%
<b>Knowledge on &gt; 4 danger signs</b>	<b>25%</b>	<b>64%</b>
<b>Total score %</b>	<b>47.0%</b>	<b>68.0%</b>

*The knowledge on danger signs of labor and delivery is increased by 45%, than the baseline. (68-47\*100/47)*

### 3.2.4 Knowledge on Postpartum danger signs

Almost three-quarters of the interviewed MCHWs could identify six or more postpartum danger signs and there was an overall increase in the percentage who could report each sign. The percentage reporting continuous vaginal bleeding was slightly lower in the final than in the baseline study. The overall knowledge was increase by 34.2% than the baseline report. (Table 7)

**Table 7. Knowledge of Postpartum danger signs**

Danger Sign	Baseline	Final
Continuous/excessive vaginal bleeding	94%	89%
Fever above 100.4 F	84%	92%
Foul smelling vaginal discharge	57%	83%
Giddiness or loss of consciousness	41%	61%
Breast redness/tenderness/pain	59%	92%
Frequent and burning micturation	19%	25%
Convulsion	13%	42%
Severe headache	19%	31%
Continuous lower abdominal pain	35%	56%
Pain/swelling of perineum, episiotomy wound, or tear	34%	53%
Insomnia/ anxiety/ depression	14%	19%
Knowledge on more than 4 signs	50%	82%
Knowledge on 6 or more signs	NA	72%
<b>Total score %</b>	<b>42.6</b>	<b>58.4</b>

### 3.2.5 Knowledge on Neonatal danger signs

In total, the knowledge of neonatal danger signs is increased and more than 80% were able to recognize lethargy, jaundice, inability to suck, and a wet umbilicus as danger signs (Table 8). In addition, the percentage of MCHWs who recognized a hot or cold body as a danger sign more than tripled (from 21% to 67%), while the percentage of recognizing eye infections as a danger sign nearly doubled (from 41% to 78%). Only half knew fast breathing or cyanosis of the lips and tongue to be a danger sign, a figure slightly lower than the baseline. The overall knowledge on neonatal danger signs has increased by half times (53%) than the baseline.

**Table 8: Knowledge of neonatal danger signs**

Danger Signs	Baseline	Final
Lethargy, weak cry, poor sucking	72%	81%
Jaundice	45%	89%
Stiffness of body/inability to suck	45%	78%
Fast breathing/cyanosis of lips and tongue	55%	50%
Pus from eye/eye infection	38%	78%
Hot or cold body	21%	67%
Rash/skin infection	38%	39%
Congenital abnormality	35%	56%
Wet umbilicus/pus from umbilicus	66%	89%
Thrush infection/sore mouth	14%	36%
<b>Knowledge on more than 4 signs</b>	<b>38</b>	<b>86%</b>
<b>Total score %</b>	<b>43%</b>	<b>66%</b>

### 3.2.6 Knowledge on management of third stage of labor, immediate newborn care and postnatal care.

Table 9 describes the knowledge of MCHW's on third stage labor management, immediate newborn care and postnatal care. Regarding third stage labor management, 100% of MCHWs know to give injection Oxytocin 10 units/IM immediate after delivery of the baby followed CCT practice 94.4%, uterine massage 83% and only 70% mentioned breast-feeding.

Regarding immediate newborn care, 100% of MCHWs mentioned attention of breathing/resuscitation, 97% mentioned thermal protection and cord care, and 94% mentioned immediate breast-feeding. In post natal service component, higher percent of MCHWs mentioned Vit.A distribution (94.4%), family planning counseling was mentioned by 86% and only 75% mentioned recognition and referral of post natal danger sign. (Table 9)

**Table 9 MCHWs knowledge on third stage labor management, immediate newborn care and PNC service in normal condition**

Variables	Number	Percent
<b>Third stage labor management</b>		
- Inj. Oxytocin 10 unit/IM	36	100
- Control cord traction	34	94.4
- Uterine massage	30	83.3
<b>Immediate newborn care</b>		
- Attend breathing and resuscitation	36	100
- Thermal protection and warming	35	97.2
- Cord care	35	97.1
- Immediate breast feeding	34	94.4
<b>Post natal service</b>		
- Distribution of Vit A 200000 IU	34	94.4
- Family planning counseling	31	86.1
- Recognition and refer for danger signs	27	75.0

### 3.3 CLINICAL SKILL OF MCHWS ON ANC, DELIVERY, PNC, NEWBORN CARE AND PPH

The skills of the MCHW are major key indicator of service quality. Skills were assessed by observation and using a standard checklist. MCHW were observed in SHP and Hospital during providing ANC, PNC and Newborn care. Due to the unavailability of the event such as labour pain, delivery of baby and any other complication at the time of field visit, the team could not observed the MCHWs skill on real clients. Therefore, simulation was done at NRCS to assess MCHW conducting delivery, immediate newborn care and management of PPH skill. A total of 88 procedures were observed to check the clinical skill of MCHWs. They were ANC= 40, Delivery/labour management =8, immediate newborn care= 8, management of PPH= 7, PNC= 15, and normal newborn care at 42 day= 10.

### 3.3.1 Basic Skills (common activities in all procedures)

Almost all of the observed MCHWs satisfactorily demonstrated the basic skills before the provisions of ANC, delivery, PNC, newborn care and PPH management services (Table10).

**Table 10 Basic skill performed by MCHWs before procedure (N=88)**

Performance	Percent
Greetings/ welcome	98.4 %
Maintained privacy	97.0%
Hand washing	87.4%
Collect necessary equipment	98.9%
Ask women to empty bladder	89.3%

### 3.3.2 Skill on antenatal checkup

Table 11 shows the MCHW's skill in providing prenatal care to the mothers who come to the SHP or hospital for the check up. More than 80% of the MCHWs demonstrated the skills on all steps of prenatal care except the follow up procedure. Higher number of the MCHWs performed physical examination and health teaching/counseling while follow up procedure was performed only by 73%. **Overall skill on prenatal care is increase by 178% than the baseline data.** It was 30% in baseline and increased to 83.4% in final assessment (Table 11a).

**Table 11 Total score obtained by MCHWs in prenatal care (N= 40, Score 3 x 40 = 120)**

Steps and skill on antenatal care	Final evaluation 03	
	Score	Percent
History taking (personal, medical/surgical, obstetrical	105	87.5
Physical/ abdominal examination	107	89.2
Explain and record the findings	96	80.0
Referral knowledge in case of danger signs	98	81.6
Health teaching and counseling	107	89.2
Reconfirm the understanding the information given	99	82.5
Follow up procedure	88	73.3

**Table 11a Total percent score on ANC skills over time**

Evaluation Period	Average score
Baseline	30.0%
Regular monitoring 2001/ 02	81.7 %
Regular monitoring 2002/ 03	82.7%
Final evaluation	83.4%

### 3.3.3 Skill on delivery procedure

A total of 8 MCHWs were observed for the performance assessment of delivery skill. They were assessed on using birthing models. Highest number of the MCHWs demonstrated the skill on all steps of delivery. Hundred percents of them did monitor the progress of labor, administering of IM Oxytocin and emptying the bladder. Compared to other procedures, uterine massage was performed by lower number of the MCHWs (75%) (Table 12) *It is encouraging that the overall skill on delivery procedure was gradually increased over time. Compared to the baseline data it was increased by 368%* (Table 12a).

**Table 12 Total score obtained by MCHWs in delivery procedure (Observed cases = 8 )**

Procedure and skill in labor management	Final evaluation 03	
	Score	Percent
History taking (personal, pregnancy and delivery))	20	83.0
General/ obstetrical examination of mother	21	90.0
Monitor progress of labor	24	100
Total management of second stage of labor	22	92.0
Uterine massage	18	75.0
Control Cord Traction (CCT)	23	96.0
Provision of IM Oxytocin	24	100
Provision of antibiotics	16	67.0
Emptying the bladder (catheterization/self)	24	100
<i>Provision of oral Sedation</i> <i>Provision of I/V fluid</i>	<i>This part is included in knowledge variables</i>	

**Table 12a Total percent score on labor management skills over time**

Evaluation period	Average score
Baseline	19.0%
Regular monitoring 2001/ 02	82.3%
Regular monitoring 2002/ 03	88.4%
Final evaluation by simulation	89.0%

### 3.3.4. Skill on immediate newborn care

Table 13 shows the skill of MCHW on providing immediate newborn care. Same MCHWs who performed delivery procedure were observed for the immediate newborn care. The newborn baby model was used for this purpose. Among 5 procedures of immediate newborn care, four procedures were performed by 100% of MCHWs. Attention to breathing was performed by 75% MCHWs. The skill on immediate newborn care is increased by 22% than the regular monitoring data of 2001/2002. The total scored percent on immediate newborn care was 78% in regular monitoring which is increased to 95% in final assessment (Table 13a).

**Table 13 Total score obtained by MCHWs in immediate newborn care (Observed cases= 8)**

Procedure on immediate newborn care	Final evaluation 03	
	Score	Percent
<b>Immediate Newborn care</b>		
Attention to breathing and resuscitation	18	75.0
Thermal protection and warming	24	100
Immediate and exclusive breast feeding	24	100
Cord care	24	100
Eye care	24	100

**Table 13a Total percent scored on immediate newborn care skills over time**

Evaluation Period	Average score
Regular monitoring 2001/ 02	78.0 %
Regular monitoring 2002/ 03	90.0%
Final evaluation	95.0%

### 3.3.5 Skill on PNC service and normal newborn care

A total of 15 MCHWs were assessed for the clinical performance skill on PNC service and 10 were assessed for the newborn care (Table 14 and 15). Among 15 PNC procedures 6 were observed on actual cases and other 9 on simulation. Higher number of the MCHWs performed majority of the PNC services in both settings. Data suggests that there is oversight in certain procedure such as history taking, record keeping, and postnatal visit scheduling. However, important procedures such as health teaching, counseling and Vit A distribution was attended by more than 90% of the MCHWS (Table 14). Comparing to the regular monitoring total percent score of PNC has decreased in final evaluation (Table 15a). The evaluation checklist used in final evaluation was more detail than the regular monitoring tool, which might have influenced the results.

Regarding newborn care, more than 90% of the MCHWs demonstrated their skill on providing the service (Table 15). Among 10 newborn examined, 5 were simulated cases. Similar to the PNC, physical examination and record keeping procedure are not followed strictly by MCHWs. Data suggest that skill on newborn care has been improving gradually. Compared to the regular monitoring findings, the skill has increased by 17% (78% to 91%) in final evaluation. (Table 15a)

**Table 14 Total score obtained by MCHWs in PNC service (Observed cases =15)**

Procedure and skill on Post Natal Care	Final evaluation 03	
	Score	Percent
History taking (fever, pain abdomen, discharge etc)	28	62.0
General/ obstetrical examination of mother	37	82.0
<b>Recognition and management of complication</b>	<b>36</b>	<b>80.0</b>
<b>Health teaching and counseling (FP, nutrition, hygiene, BF, Immunization)</b>	<b>41</b>	<b>91.0</b>
<b>Vit A distribution</b>	<b>42</b>	<b>96.0</b>
Record keeping and explanation of finding	33	73.0
Post-natal visit schedule	21	47.0
<b>Total score</b>		76.0 %

**Table 15 Total score obtained by MCHWs in Newborn care (Observed cases =10)**

Procedure and skill on Newborn care	Final evaluation 03	
	Score	Percent
History taking (breast feeding, stool/urine output etc))	30	100
Physical examination of newborn	24	80.0
Teaching on exclusive breast feeding and immunization	28	93.3
Check and discuss about danger signs	28	93.3
Record keeping and explanation of finding	26	86.6
<b>Total score</b>		91%

**Table 15a Total percent score on PNC and normal newborn care skills over time**

Evaluation Period	PNC	Newborn care
Regular monitoring 2001/ 02	82%	78%
Regular monitoring 2002/ 03	98%	90%
Final evaluation	76%	91%

### 3.3.6 Skill on PPH management

MCHW's skill on PPH management is described in Table 16. The procedures were observed on 7 simulated cases. For the analysis total procedure was categorized in major 4 groups. They are immediate management, detail examination and management, perineal examination and bimanual compression. Hundred percent of the MCHWs checked the perineum of the mother to confirm the bleeding points, immediate management and detail management was done by 90% and 95% percent of them but only 47.6% MCHWs demonstrated the skill on bimanual compression. PPH is not commonly seen by the MCHWs at the community, therefore they might not have knowledge and confident on this procedure.

**Table 16 Total score obtained by MCHWs on PPH management. (Observed cases = 7)**

Procedure and skill on PPH management	Final evaluation 03	
	Score	Percent
Immediate management of PPH (history, vital signs, check for uterine contraction/ clot, retained placenta, signs of shock, emptied bladder)	19	90.5
Emergency management (give Inj. Oxytocin, CCT, uterine massage, inj Methargin if no contraction)	20	95.2
Perineal examination for tear	21	100
If tear, give bimanual compression	10	47.6

**Table 16a Total percent score on PPH management skills over time**

Evaluation Period	Average score
Regular monitoring 2001/ 02	75.7
Regular monitoring 2002/ 03	91.0
Final evaluation by simulation	83.3

### 3.4 MCHW'S SERVICE PRACTICE ON MNC and OFAC

#### 3.4.1 Service provided and practice of MCHWs

There was significant increase in the percentage of MCHWs providing a full range of MCH services. All were providing ANC, followed by delivery care (92%) and family planning services (89%) at SHP and home. Majority of them also provided PNC (81%) and newborn care (83%). Only half were providing referral for danger signs (Table 17).

**Table 17 MNC/OFAC Service providing by MCHWs at SHP/community**

Type of service	Baseline N=29	Final N=36
ANC	83%	100%
Delivery	55%	92%
PNC service	38%	81%
Newborn care	NA	83%
Family planning	52%	89%
Referral for danger signs	41%	50%

Table 18 describes the MCHW's practicing injection and medicine during labor and delivery service. Almost all MCHWs said they administer injection Oxytocin 10 unit to the mother immediately after delivery of the baby (72%). Among them 32 practice right dose and right route (IM) but 3 of them said they provide it by IV route. Regarding antibiotics, majority of them provides Cap. Amoxycillin (58%) followed by Cap. Ampicillin (19%). Two of the MCHWs practice low dose of Amoxycillin (250mg). May be they think it is enough dose. And among 7 Ampicillin users, 4 of them use parental route. The indication for the antibiotic use was infection (52%) followed by perineal tear or infection 28%, fever 10% and breast abscess 10%. Almost 90% of the MCHWs ever use I/V infusion during labor and delivery procedure. Mainly they use it when there is prolonged labor, PPH, or mother is weak. Four of the MCHWs. from Chaughadha, Belkot, Ratmate, and Barsunchet said they do not use I/V infusion.

Table 18 Provision of medicine and injection by MCHWs during labor and delivery N=36.

Type of medicine	Name	N	Dose	Route	N	condition for giving
<b>Inj.Oxytocin</b>	Inj.Oxytocin	:36	10 units :35	IM	:32	Immediate after delivery :72%
			Missing : 1			
<b>Antibiotics</b>	Amoxycillin	: 21	250 mg : 2	Oral	:21	Infection :52%
			500 mg :19			
<b>Antibiotics</b>	Ampicillin	: 7	500 mg :6	IM/IV	: 4	Same as above
			1000 mg :1			
<b>Sedative</b>	Diazepam	: 8	5 mg : 3	IM	: 2	Fits, eclampsia : 75%
			10 mg : 5			
<b>IV infusion</b>	Dextrose/NS/Ringer lactate	: 17		IV		PPH : 37%
	Normal saline	: 15				
	Never give	: 4				Weakness : 19%
						NA : 13%
						Retained placenta : 9%

Table 19 shows the knowledge and practice of MCHWs about 6 cleans of delivery. Comparing to the baseline findings, the overall knowledge on clean delivery has increased. The obvious improvement was found in clean perineum 44% to 83.3% whereas there is little change in "clean cord tying thread". It was 69% to 80.6%. The total score obtained in baseline survey was 74%, which has increased to 92% in final assessment. Compared to the knowledge the practice of 6 cleans is lower (92% Vs 69%).

The following were the reasons for not practicing 6 cleans as reported by MCHWs:

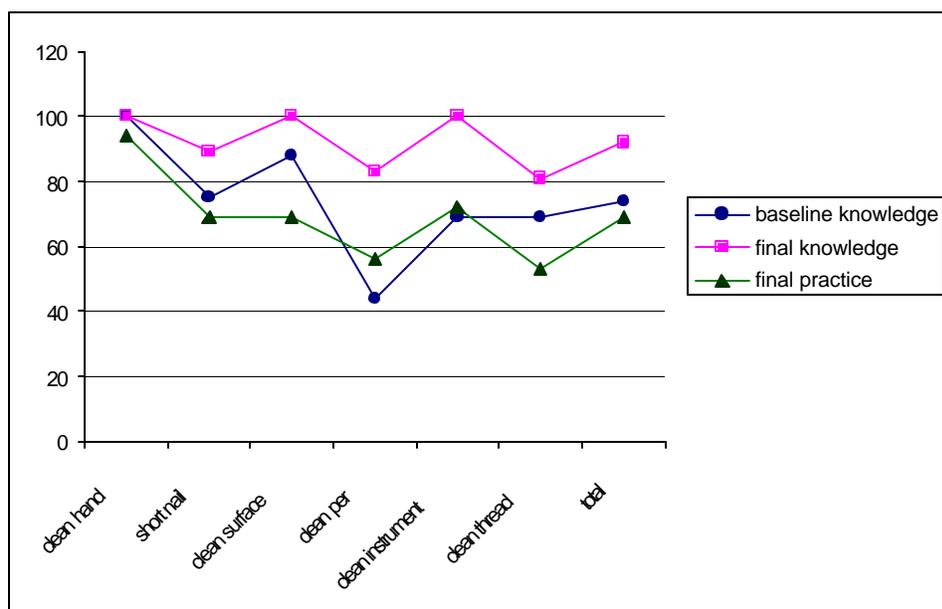
- Delivery place was very dirty to clean
- Client are not cooperative

- In emergency situation not practical, mostly to clean perineum
- There is no appropriate place for conducting the delivery
- Clients feel shy and do not allow to look at the perineum before baby comes out.

**Table 19 MCHWs knowledge and practice about "6 cleans" of delivery**

Variables	Final assessment. N= 36		Baseline. N=16
	Knowledge %	Practice %	Knowledge %
Clean hand	100	94	100
Clean and short nail	89	69	75
Clean surface	100	69	88
Clean perineum	83	56	44
Clean cord cutting instrument	100	72	69
Clean cord tying thread	81	53	69
Total percent in 6 clean	92	69	74

**Graph 1 Comparison of MCHW's knowledge and practice about "6 cleans" of delivery with baseline report**



### 3.4.2 Referral cases to the MCHWs

Table 20 demonstrates the number of referral cases from the FCHW, TBA and VHW to the MCHW. The data were collected from the recall report of MCHWs. Among 36 MCHWs, 80.2% of them said FCHW/TBA refer the ANC cases to them followed by delivery (47%), newborn (30.6%) and PNC (27.8%). During the last 6 months a total of 272 pregnant mothers, 62 deliveries, 68 postnatal mothers and 51 newborn babies were referred to the MCHW.

**Table 20 Number of referral cases to the MCHWs by TBA/FCHV/VHW. N=36**

Number of cases	ANC		Delivery		PNC		Newborn	
<b>Ever referred</b>								
<b>Yes</b>	29	80.6	17	47.2	10	27.8	11	30.6
<b>No</b>	7	19.4	19	52.8	26	72.2	25	69.4
Total referred cases in last 6 months	272		62		68		51	
Mean number of referred cases/month/MCHW	1.56		0.61		1.13		0.77	

### 3.5 Usefulness and completeness of BEOC Kit Box:

#### 3.5.1 Usefulness and problem in using BEOC Kit

Most of the MCHWs stated, that the BEOC kit is very useful (97.2%) and almost of them always use it (94.4%) (Table 21). Eighty three percent of the MCHWs refill the Kit box with the money given by clients while rest other 16.7% of the MCHWs said they refill it by their own money.

More than one third of MCHW said they do have some problem in using BEOC Kit. The problem mentioned were clients do not pay for the medicine and equipment (57.1%), because of unavailability of the medicine and financial constraint there is a problem in refilling the Kit Box (28.6%), provided BP instrument and other stainless steel equipments such as artery forceps, scissors not of good quality, BP instrument frequently get out of disorder (28.6%), and only two MCHWs mention inconvenient in carrying the Kit Box because of the heaviness.

**Table 21 Frequency of using BEOC Kit by MCHWs**

Variables	N	Percent
<u>Usefulness of Kit</u>		
- Very useful	35	97.2
- <b><u>Somewhat useful</u></b>	1	2.8
<u>Frequency of using</u>		
- Always use	34	94.4
- Most of the time use	2	5.6
<u>Refilling of the Kit</u>		
- With money given by client	30	83.3
- With own money	6	16.7
<u>Problem in using BEOC Kit</u>		
- Yes	14	38.9
- No	22	61.1
<u>What are the problem</u>		
- Client do not pay	8	57.1
- Problem in refilling	4	28.6
- Inconvenient in carrying the kit	2	14.3
- BP instrument and equipment are frequently out of order	4	28.6

### 3.5.2 Completeness of the Kit Box

A total of 16 BEOC Kits of MCHWs were checked according to checklist for the completeness of medicine and equipment. For the completeness BEOC kit were graded with certain criteria such as: among 33 items if >30 is complete = "almost complete", 26-30 complete = "majority complete", 17-25 complete = "half/above half complete", and <17 complete = "less than half complete". More than 87% of the BEOC kits were complete (majority and almost complete). Only 12% were below 75% complete and no one has less than half complete (Table 22).

**Table 22. Completeness of prescribed items in BEOC Kit Box.**

Items in BEOC Kit	BEOC Kit	
	N=16	Percent
> 30 items complete	7	43.8
26- 30 items complete	7	43.8
18 – 25 items complete	2	12.6

**Total items in BEOC Kit = 32**

Table 23 shows the particular items available or missing in BEOC Kit. Item number 1 (as categorized below) was available in all BEOC Kits of MCHWs. They were stethoscope, BP set, artery forceps, cord-cutting scissors, rubber catheter, plastic apron, kidney tray and disposable gloves. However common items in BEOC Kit was Item No 1-3 which are available in more than 80% of the Kits. It has been noted that very important Items such as Injection Oxytocin, cap

Amoxycillin, bulb suction and Inj.methargin were missing in 20-30% of the BEOC Kits. These are the frequently used medicines in the community, which had to replace soon.

**Table 23 Percent distribution of completeness of BEOC Kit's items.**

Item No	Percent complete	Name of available Items
1	100%	Stethoscope, BP set, Fetoscope, Artery forceps, Cord cutting scissors, Rubber catheter, Plastic apron, Kidney tray, Disposable gloves
2.	90-99%	Thermometer, Tab Paracetamol, I/V cannula, Sutkeri Samagri, Spirit swab, Soap, Disposable syringe, Tab.Nifedipin, Bowl steel, tooth dissecting forceps
3.	80-89%	Betadine solution, Adhesive tape, Dressing gauze, I/V set, Inj. Diazepam
4.	70-79%	Inj. Oxytocin=75%, Cap Amoxycillin, Bulb suction,
5.	60-69%	Inj. Methergin= 68.8%, Inj. Normal saline, Torch light, tab Metronidazole

### 3.6 Problems faced by MCHWs in providing MNC and OFAC services

According to MCHWs' report and AHW, the problems in providing quality MNC and OFAC services in the SHP/community are lack of physical facilities (building, room, bed, furniture) (59%), inadequate supply such as medicine, equipment (52%), inadequate supervision from DHO (44%) (Table 24). *Surprisingly, the changes are in negative direction. The problems are increased than the baseline findings, which suggest the direct effect of political instability and Maoist insurgency in the country during last few years, because of that the supervision visits were decreased.* There are several other problems mentioned by MCHWs such as lack of knowledge on STI and gynecological problem (38%), shortage of staff (27%), lack of transportation (15%), low of confidence (15%), community cooperation (17%) and difficult to get fees of services and equipment used (14%) from the clients. These findings are little lower than the previous findings.

**Tables 24 Problem faced by MCHWs in providing MNC and OFAC service**

Variables	Baseline. N=16	Final. N=36
Inadequate supervision from DHO	25%	44%
Lack of training on STI and gynecological problem	75%	38%
Inadequate supply	50%	52%
Shortage of staff	38%	27%
Lack of transportation facility	31%	15%
Lack of physical facility	25%	59%
Low confidence	NA	15%
Community cooperation	NA	17%
Do not pay for the service	NA	14%

**NA: not available**

### Problem in referring the cases

Table 25 shows the reasons of not following the referral advise of MCHWs. Among 36 MCHWs 10 said, even though they refer the cases, many of them do not go to the referral place. The reasons were the accessibility, affordability and belief on traditional healer.

**Table 25 Problem in referring the cases**

Problem in referring the cases	Number
Far distance and transportation problem	2
Financial problem/lack of willingness	6
Prefer to go to traditional healer	2

Table 26 demonstrates the suggestions given by MCHW for the improvement of MNC and OFAC service in SHP and community. Almost half of them suggested an intensive community awareness program. They emphasized that without community awareness about the maternal and child health and about the role of health worker, it is difficult to achieve the program objective. Other most frequently mentioned suggestions were MCHW must be the local person (36%) followed by frequent supervision is necessary to make MCHW more confident (31%), and adequate supply (19%) etc

**Table 26 MCHW's suggestion to improve MNC and OFAC service in the community**

S.No	Suggestions	Percent
1.	Intensive community awareness program	47%
2.	MCHWs must be from the local people	36%
3.	Frequent supervision	31%
4.	Adequate supply –what are these	19%
5.	Additional training to MCHWs on STI and gynecological problem	14%
6.	PRA training/physical facility	11%
7.	Health worker's role should be clarify to the community	6%
8.	Financial support to the poor mother	6%

### 3.7 Findings from Exit interview

#### 3.7.1 Availability and accessibility of MCHWs service

Findings presented in Table 27 and 28 are from the exit interview of 78 MWRAs in SHP. The availability and accessibility of MCHW and service in SHP are described in Table 27 and client's satisfactions are in Table 28. More than 80% of the mothers said MCHW were always available whenever they come for the check up. Majority of them waits less than one hour for the check up and the mean waiting duration was less than half-hour. Almost two thirds of the mothers live within an hour of walking distance from the SHP. Mean distance is 39 minutes and farthest is 2.16 hours.

**Table 27 Availability and accessibility of MCHW. N=78**

	Percent
<b>Availability of MCHW in SHP</b>	
Return to home without being checked (sometime)	16.7
Always available	83.3
<b>Waiting time to see the MCHW today</b>	
Less than 1 hour	82.1
1 hour and more	17.9
Mean waiting duration	23.20 minute
Longest waiting duration	2.5 hours
<b>Distance of SHP from home</b>	
Less than 1 hour	62.8
1 hour and more	37.2
Mean distance	39.1
Farthest distance	2.16 hours

**3.7.2 Satisfaction level of MWRA with services provided by MCHWs**

Higher number of the mothers is very satisfied (61%) and feel free to ask question with MCHW (83%) (Table 28). More than 90% of them said MCHW are good listener of their problem and they received all care and treatment as their expectation (93%).

**Table 28 Client satisfaction with service provided by the MCHW today. N=78**

Level of client satisfaction	Percent
<b>Level of satisfaction</b>	
Somewhat satisfied	10.3
Mostly satisfied	28.2
Very satisfied	61.5
<b>Felt free to ask the question</b>	83.3
<u>MCHW listen to clients</u>	91.0
<b>Received all expected care and treatment</b>	92.3

**3.8 Findings from regular monitoring records and reports of Nepal Red Cross Society, Nuwakot district office.**

This section of the result is calculated from the existing data of regular monitoring and supervision record of NRCS, Nuwakot.

### 3.8.1 Overall knowledge assessment over time

Table 29 shows the knowledge scores of MCHWs on MNC and OFAC in different time interval. The change in overall knowledge of the MCHWs was assessed as per MCHW protocol. There were two sets of data from first phase and the second phase training areas. Data for a full 27 months was available only for 1st phase training area and the second phase training has completed only 20 months ago. A total of 26 MCHWs in first phase area and 27 MCHWs in second phase area were included in the knowledge assessment analysis.

The knowledge among MCHWs was assessed before and after refresher training based on new MOH, MCHW and Reproductive Health curriculum. For the purpose of quality control, MCHWs were assessed in every three months interval by field supervisors (staff nurses) and the results were submitted to the Nepal Red Cross Society, Nuwakot. The baseline percentage shown in Table 29 is the pretest knowledge result of MCHWs before refresher training. The findings shows an impressive improvement and good retention of knowledge immediate after training to first 21 months of training but scores decreased significantly by 27 months in first phase training area. Similarly, in second phase area the gradual improvement shown up to 9 months period and was again decreased in 15 months evaluation. This unexpected result in both groups may be due to the modification of evaluation tool during last test. The major modifications of evaluation tool were, the methods and types of questionnaire construction although the subject matters were the same.

**Table 29 Knowledge scores obtained by MCHW in regular basis assessment according to MCHW protocol**

Intervention phase	Baseline (Pre-test)	Knowledge score				
		3 mos	9mos	15 mos	21 mos	27 mos
1 <sup>st</sup> phase (early intervention area)	75%	82%	79%	86% @	92%	* <b>66.3%</b>
2 <sup>nd</sup> phase (late intervention)	40%	87%	91%	* <b>74%</b>	NA	NA

*Training in 1<sup>st</sup> phase area: August- Dec 2000*

*Training in 2<sup>nd</sup> phase area: Sept 01- January 2002*

*\* modification of questionnaire for monitoring.*

*@ Revision/meeting for good supervision/monitoring*

### 3.8.2 Number of Caseload and referral cases according to record

Table 30 and 31 describe the total number of caseload and mean number of cases per MCHW per month in different time period. *The data were derived from CS-15 record of Nepal Red Cross Society, Nuwakot.*

The number of caseload demonstrated in Table 30 was compiled data from the 1st phase and 2nd phase intervention area. In first column, one year's data of 1st phase (Oct-Sept 02) and six months data of 2nd phase (Feb-Aug 02) has been compiled for the analysis. In the year of 2002,

a total of 2299 ANC, 464 delivery, 663 PNC, and 454 newborn care service were provided by MCHWs. Encouragingly, the data in semi-annual record shows that almost similar number or even higher number of cases were served within the 6 months period (Oct-March 03). However, to get the full phase comparison another 6 months data has to be compiled in next analysis. Table 30a describes the detail of complicated deliveries handled by MCHWs and referral cases. Majority of the cases referred during ANC were short height, jaundice, and high BP; during delivery were twin, breech presentation, cord round neck, retention of placenta, cord prolapsed, IUFD; and during PNC were high fever, PPH, jaundice etc. Referral cases were higher during the delivery period, whereas there was no single referral case of newborn.

**Table 30 Total numbers caseload and referral service made by MCHWs (regular monitoring data) \***

Service provided	Annual Oct-Sept 02	Semi-annual Oct-March 03
<b>Antenatal care (total)</b>	<b>2299</b>	<b>2353</b>
New case	1045	969
Old case	1254	1384
<b>Delivery (total)</b>	<b>464</b>	<b>372</b>
Home delivery	438	353
Health facility	19	20
BEOC	47	10
<b>Postnatal care (total)</b>	<b>663</b>	<b>544</b>
Vit "A" distribution	638	499
Family planning	613	497
Identify & manage - complication	15	2
<b>Newborn care (total)</b>	<b>454</b>	<b>344</b>
Airway cleaning	454	344
Warming	454	344
Immediate breast feeding	453	312
Cord care	454	344

*Annual: records from 51 MCHWs*

*Semi annual: records from 49 MCHWs*

**Table 30a. Number of complicated deliveries and referral cases by MCHWs .**

Referred cases	Annual Oct-Sept 02	Semi-annual Oct-March 03	Reason for referral
Complicated deliveries			Prolonged labor, transverse lie, Cord prolapsed, Twin, Retain placenta
PPH	4	4	
Prolong labor	3	2	
Prolapsed (cord, hand, feet)	2	2	
Cord round neck	1	3	
Breech presentation	2	6	
IDFD/SB	4	4	
Transverse lie	2	3	
Retain placenta	26	20	
Total referral in delivery	12	10	
ANC	3	9	High BP, short height (<149 cm, Jaundice
PNC	2	4	PPH, Jaundice, tear, high fever

Compared to the baseline data, there is a significant increased in number of caseload in annual and semi annual records of 2002 and 2003 (Table 31). Findings suggested that the caseload was increased more than two times for newborn care (224%) followed by delivery (216%) and ANC (129%) in 1st phase area. Similarly in 2nd phase area the increment is higher during ANC followed by PNC and delivery. However, it is wise to wait for another 6 months data to get complete picture on this issue to critique the situation.

**Table 31 Mean number of caseload per MCHW per month (data from regular monitoring register)**

Variables	Baseline	Jan-Sept 01 (N)	Annual Oct-Sept 02 (N)	Semi-annual Oct-March 03 (N)	Case load Increased
1 <sup>st</sup> phase area (old phase)					
Antenatal care	3.75	2.8 (646)	3.6 (1067)	8.6 (1232)	129%
Delivery	0.38	0.5 (121)	0.63 (190)	1.2 (179)	216%
Postnatal care	1.25	0.6 (140)	1.0 (297)	2.0 (293)	60%
Newborn care	0.37	0.5 (110)	0.63 (188)	1.2 (168)	224%
2 <sup>nd</sup> phase area (new phase)			<u>Feb-Sept. 02</u>	<u>Oct-March 03</u>	
Antenatal care	2.76	NA			
Delivery	0.61	"	6.2 (1286)	7.5 (1121)	172%
Postnatal care	0.69	"	1.3 (274)	1.3 (193)	113 %
Newborn care	0.77	"	1.6 (366)	1.7 (251)	146 %
			1.3 (266)	1.2 (176)	56%

*1st phase: records from 25 MCHWs (annual), 24 MCHWs (semiannual)*

*2nd phase: records from 26 MCHWs (annual), 25 MCHW (semiannual)*

Baseline scores from Phase 1 (n=13), 1999 and Phase 2 (n=16), Feb. 2000

Training in 1<sup>st</sup> phase area: August- Dec 2000

Training in 2<sup>nd</sup> phase area: Sept 01- January 2002

### 3.8.3 Record keeping status

Record keeping status was checked during the field visit in SHP and MCHWs diary. Among 36 checked records 28% found to have complete and clear recording, 64% had satisfactory record and other 8% did not kept the record at all or poor recording. The reason for not keeping record may be due to negligence or may be due to inadequate reinforcement and encouragement from DHO as well as inadequate supervision from immediate supervisors.

**Table 31.** Record keeping status of MCHWs about MNC and OFAC in SHP

Category	N	
Up to date record keeping	10	28
Satisfactory	23	64
No record/poor	3	8

### 3.9 Results from FGD and In-depth interviews

To obtain detail information on MNC and OFAC service and MCHW's performance in the community, a total of 12 FGD (7 user group and 5 non-user groups) of mothers and 15 in-depth interviews among key-informants were conducted.

#### 3.9.1 Focus Group Discussions

Although seven groups had been convened as “user groups” and five as “non-user groups,” a comparison of these two groups revealed few significant differences in knowledge, practice, or opinion, rendering a comparative analysis irrelevant in some of the groups. All women in user group and few women in non-user group know the MCHW in their village and utilized at least some of her services, mostly ANC. The one notable exception was a non-user group comprised of scheduled caste/marginalized group women, in which there was no practice of receiving services from the local MCHW. Another group had only received Depo Provera injections for family planning. The findings from the seven user groups are presented first, followed by the one genuine non-user group and the essentially non-user group.

#### 3.9.1a Knowledge of MCH services and MCHW

While women in four of the groups did not know the term “maternal and child health services,” all of the women knew of the MCHW (often by name rather than by title) and the services she was providing. Most common sources of information regarding MCH services were FCHVs, mother's groups, BCC activities, TBAs; radio, the local MCHW, VHW, and friends. *PLA classes and distribution of Key chain(part of the BPP) were the most effective activities to increase the ANC client in SHP.*

Descriptions of MCH service ranged from simple definitions such as “activities for mother and child health” to detail list that included from immunizations to types of food that pregnant women should eat to ensure good prenatal health.

When asked “what kind of services the local MCHW provides?”, women listed ANC, assisting deliveries, management of complications, health education, TT vaccination, child immunization, family planning and counseling, referral, newborn care, iron and medicine distribution. There was some variation in the answers given by the groups, but most listed the majority of these services. Many of them are still not very clear about the role of MCHW especially on conducting the deliveries. They regarded them as primary health care provider not the MCHW.

### **3.91b Service seeking pattern**

Visiting the MCHW for ANC was found to be standard practice among most of the women and it is increasing. Some also said that they visited the FCHV and women from Chhaugadha (VDC) said that they received care from the AHW as well because MCHW was not available after office time.

For delivery, home delivery attended by a TBA, mother-in-law, or neighbor women was still in the practices. All the groups stated that the MCHW is called only in cases of obstetrical emergencies/complications such as prolonged or obstructed labor, hemorrhage, cord prolapsed, or retained placenta.

All of the groups affirmed that there had been positive change in service seeking patterns in their communities. Whereas before women relied either on traditional healer or the district hospital in Trisuli and many died from obstetrical complications, the MCHWs are now effectively managing maternal and child health issues at the village level. The numbers of women seeking ANC has increased, the level of awareness has increased due to health education and maternal and child deaths have decreased. Earlier women do not believe MCHW and feel shy to go for check up but things have been changed in these days, 38 years women stated. The motivating factors for the increased ANC were: mothers believe MCHWs are qualified and skilled person, who can make early detection of danger signs and make their baby healthy. *Especially after refresher training and equipped with BEOC kit, the utilization of MCH service has been increased, community started to believe the MCHW.*

### **3.91c Accessibility/availability of the MCHW**

The availability of the MCHW was an issue in several communities. Women in three of the groups reported that their MCHW was available 24 hours a day, but women in other groups said that the MCHW lives some distance from their village and was only available during office hours. Because of the unavailability of MCHW in SHP, often they seek help with TBA, AHW or take the cases to the hospital.

### **3.91d Opinion of MCH program**

All of the women expressed satisfaction with the MCH services provided by the MCHW. One 40 years old Mijar woman stated "Now a days even plants need fertilizer, then why not we seek service to make our baby healthier". Women felt that these services were useful and important for their communities and they trusted the MCHWs' knowledge and skill. Women in two groups said they felt comfortable with a MCHW as female service provider. "*Aimai ko betha aimailai nai thaha hunchha*" "women knows women's problem". All placed high value on the MCH services for the health of mothers and children. Women in Sundaradevi and Chaughadha said, the program is helpful to reduce the unnecessary maternal and neonatal death.

### **3.91e Fees for service sustainability**

There was great diversity of opinion concerning if and how much the MCHW should be paid. In some communities there is already the practice of paying the MCHW for drugs and materials; in others they pay her some small fee (in cash or in kind) for services. Most of the FGD said MCHW must be paid for their service because "*bhada lagchha*". *Women helping during delivery must be paid otherwise they will be in dept.* Groups that also had experience in receiving MCH services from AHWs made reference to the fact that AHWs are paid for their labor, so MCHWs should be as well. In one community they said AHWs were paid up to Rs. 3500 while in another they said that the usual AHW/MCHW service fee was between 200 and 300 NC. In one group they said that since the government pays the MCHWs, clients should only pay a small fee if the MCHW comes after office hours. Another said that there should be no service fees, only drug and material charges. Others suggested that the pay scale should be based on the condition of the mother or the rate must be fix by community. Life is more valuable than the money and we are happy to pay money for the MCH service, 30 years Tamang women in Lachyang said.

### **3.91f Suggestions for the improvement of MCH service from the FGD and In-depth interviews**

- MCHW should be trained to handle complicated delivery and to treat gynecological problems such as uterine prolapsed.
- Add more MCHWs or other trained female health workers/at least two MCHWs are necessary in each SHP.
- Community awareness program about the importance of MCH services. At the same time the role of MCHW and AHW should be clarified to the community.
- Ensure accessibility/availability of MCH services when needed. MCHW should stay in the SHP for full time and her residence must be near by SHP.
- Increase length of working hours for the MCHW and AHW.
- Improve and repair physical facilities, and supplies of medicine and equipment at the SHP
- Need ambulance facility
- MCHWs should be paid for the medicine and service. The community or the Government should fix service charge.

### **Key findings from non-user group**

The FGD was conducted in backward (scheduled caste) community and most of them were non-users of MCH services, in spite of the fact that the SHP was within a five minutes walk. And another disadvantaged group were Rai women in **Ratmate VDC**.

### **Knowledge of MCH services and MCHW**

Women in the scheduled caste group did not know what was meant by “maternal and child health services.” They also were not familiar with the word “MCHW” although they knew the name of the MCHW in their VDC. They say that no one has told them to go SHP for services, but they have some knowledge from listening to the radio.

According to the participants, the MCHW provides immunizations, treatment for fever, treatment and dressing of wounds and other general services at the health post. There was no awareness that the MCHW is primarily a maternal and child health care provider.

One Rai woman with four children claimed to know nothing about MCH services. Another said she had heard about the presence of an MCHW in the health post, but did not go. One mother-in-law said, *"if every thing is fine with the pregnancy it is not necessary to go for ANC", and "we don't have time to visit SHP"*.

### **Service seeking pattern**

The scheduled caste women said that they usually go to senior women of the community and TBAs for delivery and other maternal and child health care services. Sometimes they also consult with traditional healers when problems arise during the antenatal, delivery, and postnatal period. Senior women are the main delivery attendants in the community. One woman said, "I think it is better to consult with MCHW however we are not consulting with her."

Rai women in Ratmate said, they don't know that MCHW are trained for conducting the delivery thus they usually seek help from TBA and FCHV. Other said, they feel shy to go for check up and delivery. The women said, “We do not tell anybody when we are pregnant. When the time comes for delivery we stay at home, hiding in one corner without telling others.” They reported that the senior women in the community told them there was no need to go to the SHP.

The following story elucidates MCH issues in this community:

*Ganga Mijar, 27, from Gerku, has been pregnant and given birth four times. Her first delivery was conducted at home without the support of any family members and the baby born dead. The second time, she had prolonged labor pain and consulted the local Jhakri but the problems did not subside and she was referred to Trishuli hospital by community members. The hospital further referred her to Kathmandu due to her complications. Unfortunately she delivered a dead child on the way and returned home. The very weak and anemic looking Ganga added that she had consulted with health workers during her third and fourth pregnancy and these two children were born alive. However, she did not consult with the health workers at the time of delivery, but relied on the senior women of the community and family members. During pregnancy checkup she was not talked or advised anything about birth preparedness by MCHW. Anyway, she was very satisfied with the MCH services and believes that her 3<sup>rd</sup> and 4<sup>th</sup> children are now in good health due to the medicine she received during her ANC visits.*

### **Accessibility/availability of the MCHW**

When asked about the MCHW, one young Mijar woman said, "Maybe she is not for us." We don't know what kinds of services they are providing. Is it because of majority MCHWs are Brahmin/Chhetry – Nuwakot people are very sensitive about the caste system – they observe it – they do not allow lower caste to any cultural practices, not allow to enter in their homes etc. They do not express these issues openly.

Rai women indicated that the MCHW lives far away from their village. It is difficult for the women to meet her as she is only available during office hours and usually leaves the SHP around 2 or 3 p.m. The women said that if they need help they call the AHW or the TBA/FCHV. The women appeared to have a very high opinion of the AHW as he came whenever they needed him and was doing a good job in their village.

### **Opinions of MCH program**

The women expressed that maternal and child health care is very important for their village and that it is better to receive services from the health facility for the improvement of their health. However, they also said that no one tells them about these important issues. Rai women in Ratmate had received only Depo injections from the MCHW; most had a good opinion of the MCHW from this interaction but one woman said she got pregnant after the shot and believes it was not shaken properly before injection. They stated that it would be better if there was an MCHW in their own village so that they could go for antenatal checkups and have access to delivery assistance if necessary.

### **Fees for services**

The women agreed that the MCHW should be paid for her services, as they already have the practice of paying the TBA. 500 to 600 Rs was considered reasonable payment.

Majority of the women felt that it was reasonable to pay the MCHW about Rs. 1000-1200 for her services in assisting delivery.

### **Summary and Conclusions from Focus Group Discussions**

- In most communities women are aware of the MCHW, utilize her services, and are very satisfied with the MCH program
- The service seeking pattern is especially encouraging in ANC, but the utilization of MCHWs for normal delivery is extremely low
- Availability and accessibility of the MCHW were significant issues, both among the user and non-user groups
- Among non-user groups, in addition to access issues, lack of awareness hampered service utilization and caste issues as well. They hesitated to seek help from higher caste and feeling of neglected persists.
- Women in both user and non-user groups affirmed that maternal and child health services are important for the health of mothers and children in their communities
- There is great diversity of opinion on the payment of MCHWs; most women seem willing to pay for at least drugs and materials and some compensation for labor.
- Primary suggestions for improvement included: further training of MCHWs, increasing access/availability of MCHWs, awareness raising in the community, better supplies

### **3.9.2 In-depth Interviews**

A total of fifteen in-depth interviews with key informants (three staff nurses, four TBAs, two TBA/FCHVs, three AHWs, and three community leaders) were held using a structured, open-ended questionnaire.

#### **3.9.2a Knowledge and perception of maternal and newborn services in the community**

All the interviewed persons were aware of at least some maternal and newborn services available in their community and all were of the opinion that the MCHW program was very useful for reducing maternal and child morbidity and mortality.

Nearly all respondents stated that antenatal and delivery care were components of MCH services in their community. The responses given as to other specific types of maternal and newborn services varied slightly between respondents, although there was considerable overlap. Four TBAs also mentioned nutrition, and two also discussed immunization and breastfeeding counseling. One TBA mentioned that the program also educated husbands and mothers-in-law. One of the TBA/FCHVs stated that maternal and child health included avoiding early marriage, TT and Depo injections, and the treatment of diarrhea and pneumonia.

Both VDC leaders mentioned immunization, but one went further to list treatment for retained placenta, family planning, vitamin A distribution, and community drug scheme. Among the interviewed staff nurses, all three cited counseling/education and newborn care, two mentioned PNC and FP, and one cited identification of danger signs and timely referral. Two also mentioned immunization and one cited iron and vitamin A distribution. The AHWs said that MCH included ANC, PNC, newborn care, delivery, and family planning.

### 3.9.2b Perception on the appropriateness of MCHWs as MNC and OFAC providers

All interviewees agreed that MCHWs are appropriate persons for providing MNC and OFAC services at the village level. *All emphasized that after receiving refresher training MCHW are more competent and skilled.*

Two TBAs and two community leaders said that MCHWs are the nearest and most easily available source of MCH services. Most of the respondents said that MCHWs were the appropriate MCH care providers because of their training and competency in recognizing danger signs, providing treatment, and referring if necessary. A number of respondents (one VDC leader, two AHWs, two TBAs, and two staff nurses) mentioned the MCHWs social status as local women. Because MCHWs are married housewives from the community who are familiar with the local language and culture, they are particularly well suited for providing women's health care in the village as women feel comfortable going to the MCHWs and sharing their problems with them.

Two TBAs felt that although the MCHWs are appropriate sources of MCH services there are too few of them to sufficiently attend to the needs of all community people.

### 3.9.2c Changing pattern of MCH service seeking practices

Similar to the finding of FGD, the general trend of utilizing of MCHW services is increasing, particularly for ANC. While TBAs are still acknowledged as the primary service providers for delivery care, they refer women with complications and also have the practice of referring mothers to the MCHW for ANC and other services, as they have the necessary knowledge, skills, and materials. The two TBAs both mentioned awareness raising through mother group health program (MGHP) meetings and the training of MCHWs and other health workers as contributing factors for the increase in MCHW service seeking behavior. One TBA said that while women used to give birth in a field, many now give birth attended by an MCHW using a Clean Home Delivery Kit. *One of the community leaders also mentioned an overall improvement in clean birthing practices.*

One VDC leader said that antenatal, delivery, postnatal, and newborn care are mostly provided by the MCHW in the SHP and that service seeking from MCHW is increasing, especially for ANC and child care. He also claimed that there was a reduction of maternal and child death after the CS 15 intervention.

The other VDC leader said that delivery services are provided by AHW because he is available 24 hours, while the MCHW lives in another VDC and is available only during office hours. However, MCHWs provide the majority of ANC and the number of ANC and delivery cases handled by the MCHW is increasing, as clients are satisfied with their services.

The nurses all stated that ANC and PNC services are provided by the MCHW at the SHP or home, but that cases of delivery by the MCHW at the SHP are rare. **One nurse pointed to the**

efficacy of the 45-day refresher training, after which the number of ANC cases and delivery cases handled by the MCHW increased. *Another nurse said that the MCHWs competency and the level of comfort that community women feel with her is responsible for an increase in the utilization of MCHW services.*

One AHW had data to prove the increasing utilization of MCHW ANC services at his SHP. The number of visits this last year was 149 compared to 65 the year previous. He stated that the increase was due to the skill of the MCHW, the regular attendance of AHWs at the SHP, and the efficacy of BCC classes. Another AHW thought that the FCHVs referrals and the good performance of the MCHW were responsible for the increase.

One TBA/FCHV alluded to the efforts of the government, NTAG, DHO and NRCS as well as radio, TV, and BCC materials as key factors responsible for the increase in the number of women attending the ANC clinic. The other TBA/FCHV thought that BCC materials (specifically the key chains distributed by FCHVs to pregnant women) and PLA classes were the cause of the changes.

### **3.9.2d Referral pattern**

As stated above, it was found that TBAs handle most normal deliveries, but refer women to the MCHW in case of complications such as bleeding or prolonged labor. The TBAs acknowledged that the MCHWs had the skills, knowledge, and tools (i.e. BEOC kit) to address complications, while they themselves lacked these abilities and could not handle dangerous situations. One TBA said that all FCHVs refer all deliveries to MCHWs, the two AHW elaborated, saying that FCHVs and TBAs are referring clients to MCHWs because they now feel the MCHWs are skilled providers.

#### **A TBA's Tale from Bageswari VDC**

*I have been working as a TBA since 1988, when I received the training provided by the health post. Since then most of the people in this area come to me to consult about maternal health. Initially, the TBA program was a high priority for the village. The government provided us with delivery kits for safer delivery and there were semiannual TBA a review meeting. Now the government has discontinued these programs and has not provided refresher training for us.*

*To date I have conducted 1200-1300 deliveries and managed about 600 cases of retained placenta in my working life. I have also conducted a delivery after catheterization, even though I am not trained in catheterization but learned from watching the health workers at the hospital.*

*Now the government promotes the MCHW. She is more educated and trained. I also refer women to her, but community people don't want to go to her without me. **The government also does not think of alternative MCH service providers in the absence of MCHW.***

### 3.9.2e Management of obstetric emergencies

The general pattern of action in cases of obstetric emergencies went from TBA to MCHW or AHW to the hospital, with community members providing various forms of support along the way.

Two TBAs said that the MCHW is called as soon as obstetric problems arise, and that in their experience the local MCHW always responded to the situation by providing treatment or referring the case to the district hospital. One TBA and both TBA/FCHVs said they referred emergency cases directly to the hospital. This TBA said that the one time she had called the MCHW, she could not be found.

One of the VDC leaders said that people first call either the MCHW or the TBA, and if neither of these can help, the woman is then referred to hospital either in Trisuli or Kathmandu. The other VDC leader said that in his community, transportation and financial help is provided for the mother in cases of obstetric emergency.

The staff nurses gave slightly different answers. One simply said that people tend to wait for some time and then call a MCHW, while another said that either the MCHW or the AHW helps address obstetric emergencies. The third nurse gave answer, saying that first the MCHW is called, and if she is not available, then people turn to the TBA and AHW. If neither of these providers can handle the case, then finally the woman is referred to a hospital in Kathmandu or Trisuli.

### 3.9.3 Strengths of the MCHW program according to FGD and In-depth group

Respondents named a variety of factors that they considered strengths of the program including:

- **after the 45 day refreshed training, the MCHWs are competent to provide ANC, delivery, PNC, and newborn care services; recognize danger signs, and refer in a timely fashion. Thus the refresher training was very useful for improving knowledge and skills on:**
  - provision of immunization services (BCG, DPT, polio, measles, TT)
  - community people using temporary and permanent methods of family planning
  - prevention of maternal and child death
  - increase in ANC visits among community women
  - timely/proper handling of emergencies, pneumonia, headache, and diarrhea
  - provision of vitamin A, counseling services, and safe delivery
  - empowerment of women for women's development
  - recognition and referral in case of danger signs
  - MCHWs can be present as soon as needed in the community
  - BEOC kit box with MCHW and at SHP is very useful
  - reduced cases of anemia by distributing iron
  - increased awareness through health education in the community
  - available, cost effective services in the community

- involvement of local female health workers in decision-making and other activities
- FCHVs are referring cases to the SHP and MCHW
- the program takes an integrated approach
- reduction of harmful traditional practices

-

#### **3.9.4 Program weaknesses**

The two primary weaknesses mentioned were the availability of providers and supplies. An AHW along with the community leader, which does not have MCHW from own VDC complained that the MCHW is available only for few hours a day, while the other VDC leader said that the MCHWs stock of supplies such as medicines are not sufficient. One staff nurse asserted that only one MCHW per VDC does not cover all the MCH needs of the community and another said that it was difficult to replace the contents of the BEOC kit box.

One of the AHWs listed the lack of a practical class at the RH training for AHW, HA and VHW, and no feedback system from district after the evaluation of performance as weaknesses

#### **3.9.5 Suggestions given by FGD and In-depth group for the improvement**

Further training for MCHWs and awareness creation at the community level were the two main suggestions for improving the program. One TBA specifically mentioned that MCHWs should be provided with more in-depth training on reproductive health issues such management of STIs and uterine prolapsed. Another TBA said that mother's groups should be an active part of MCH service, perhaps playing a role as fundraisers for the services.

One TBA seemed to express some resentment about the focus on MCHWs as MCH providers. Her list of program weaknesses included postponement of the TBA program and lack of equipment for the TBAs, and she suggested that training be given to TBAs as well as the other community health workers.

All three community leaders suggested awareness creation programs; in addition, and one also suggested training to improve health workers' knowledge and skills, a continued supply of materials to the MCHWs, and a program that is sustainable for local people. All of the staff nurses said that regular refresher training and ongoing supervision for the MCHWs would be helpful. Nurses and AHW mentioned a need of awareness creation and provision of sufficient supplies to improve the program. One AHW focused on the use of BCC classes, suggesting that BCC training should be given to AHWs, MCHWs, and VHWs, and that BCC classes be supervised by SHP staff. He also suggested that if good facilities were established (building, furniture) the outreach clinics would attract more clients. Another AHW thought that messages should be disseminated through the school health program and further community education.

The TBA/FCHVs had suggestions more pertinent to their immediate situation. One said that the SHP had previously been housed in the VDC office, but this is burned down by the Maoists and services are being carried out at local school therefore, a need of building for the SHP. She also

suggested that there be regular transportation so that they could better manage obstetric emergencies. The other's only suggestion was to improve maternal and child health through completely stopping the practice of child marriage in her village.

### **3.9.6 Summary and conclusions from In-depth Interviews**

- Knowledge and appreciation of the programs was universal among the interviewees.
- The MCHWs are perceived to be the providers of ANC, delivery care, and PNC, along with a host of related health services.
- MCHWs are considered appropriate MCH service providers both because of their training and competency and because of their social status as married women who understand the local language and culture.
- While TBAs are still relied upon for delivery, they refer to MCHWs in complicated cases and for ANC services.
- The practice of ANC visits seems to be increasing.
- The referral chain in case of obstetric emergencies starts with the TBA who then refers to the MCHW (or AHW), who in turn will refer to the district or Kathmandu hospital if necessary.
- Almost all components of the MCHWs' work are considered strengths of the program.
- The availability of MCHWs and supplies were considered the two major weaknesses.
- Major areas for improvement are the on-going provision of training and supplies to the MCHWs and further awareness raising at the community level, as well as the selection of the MCHW from the same VDC/community where she will be serving.

# **Chapter 4**

## **Summary, conclusion and recommendation**

### **4.1 Summary of Key Findings and Conclusions**

This chapter includes a brief discussion of the overall finding of this study and present key recommendation .

Training and support of MCHWs in MNC, OFAC and effective BCC activities significantly increased utilization and quality of MNC and OFAC services in Nuwakot District. The overall knowledge, skill and practice of the MCHWs and utilization of the MNC and OFAC service by target population have been significantly increased (10% - 300%). Majority of the MWRAs was aware of MCH services and MCHW, utilizes services and is satisfied and feels importance of the services. However, in some VDCs the availability and accessibility of the MCHW were still a significant issue. Particularly, the refresher training organized by CS-15 project was appreciated by all community and service providers (MCHW). After the 45 days refresher training, the MCHWs are more competent to provide ANC, delivery, PNC, and newborn care services; recognize danger signs, and refer the cases in a timely fashion. Thus the refresher training was very useful for improving knowledge and skills of MCHWs which furnished with BEOC Kit.

#### **Quality of MNC and OFAC**

Quality was assessed through a combination of knowledge and practice assessments of MCHW, as well as client satisfaction. The average knowledge and practice scores increased in every area, and community satisfaction as gauged through exit interviews, focus group discussions and in-depth interviews, also seemed high, indicating that the training and supervision program has improved the quality of the MCHW services. Details on each area are summarized below.

#### **Knowledge of MCHW**

Knowledge scores in every area increased over the baseline and the majority of MCHWs could recognize the major ANC, delivery, neonatal, and postpartum danger signs. Increases in average knowledge scores were as follows:

- Knowledge on danger signs during pregnancy rose 47% from 49% to 72%.
- Knowledge of danger signs during pregnancy requiring immediate referral increased 24% from 54.3% to 67.5%.
- Knowledge danger signs during labor and delivery increased 45% from 47% to 68%
- Knowledge on postpartum danger signs rose 37% from 42.6% to 58.4%.
- Knowledge on neonatal danger signs increased 55% from 42.9% to 66.3%.
- The large majority of the MCHWs could name the components of third stage labor management, immediate newborn care, and PNC services
- 92% of the MCHWS knew about the "6 cleans" of delivery
- Over time, the knowledge of the MCHWs appears to be well retained.

## **Skill and Practice**

- Almost all of the MCHWs were found to be satisfactorily performing basic clinical skills.
- The average score for each ANC skill was above 70% and the average score for ANC skills was found to be an impressive 83.4%.
- Delivery skill is found dramatically improved, with an average score of 89.0% in the final evaluation.
- Immediate newborn care skills were also found to be extremely good, the average score in the final evaluation was 95%.69% of the MCHWs were found to be practicing the "6 cleans" of delivery
- The average score for PPH management was 83.3% in the final evaluation, compared to 75.7% in the baseline.
- The average score for PNC skill was 76.0%
- The average score for newborn care skills was 91.0%.
- 28% of the MCHWs were found to be keeping up to date records at the SHP, 64% had satisfactory record keeping, while 8% had no/poor records.

## **Client Satisfaction**

- In the exit interviews, 61.5% of the women said that they were "very satisfied" with the care they had received that day, 28.2% said that they were "mostly satisfied," and 10.3% said they were "somewhat satisfied. 92% said that they had received all the expected care and treatment.
- Women in the user focus group discussions expressed satisfaction with the MCHW services and considered the MCH program very important.
- The in-depth interviews revealed a range of factors that led people to feel that MCHWs are the appropriate persons for delivering MCH services at the community level, including their training and competency as well as their status as local married women.
- Most of the MWRA are aware of MCHW service, are satisfied and feel important of the service.
- Majority of the MWRA is willing to pay for MCHW's service. The reasonable rate stated was NRS 1000-1200.

## **Availability**

Access and availability of the MCHWs services seem to have improved somewhat, but not sufficiently. Quantitative data shows that many of the MCHWs live a considerable distance from the SHP, making them difficult to reach off hours and in emergencies, and the qualitative data also indicates that even in communities where the MCHWs are regular sources of MNC, availability is a problem.

- 61% of the MCHWs lived in the same VDC where they worked, but the majority 66.7% lived more than an hour away from the SHP where they provided services.

- Among the interviewed clients, 83% said that the MCHW was always available when they went to the SHP for care. The large majority (82%) waited less than an hour at the SHP to see the MCHW.
- The types of services available from the MCHWs increased over the baseline figures. 100% were providing ANC services, and about the percentage offering delivery assistance rose from 55% to 92% while the percentage offering PNC services also rose from 38% to 81%.
- In the in-depth interviews and focus group discussions, availability of the MCHWs after office hour was mentioned as a problem.

## **Utilization**

Service seeking patterns show positive improvement, especially in all aspects of MNC and OFAC service. However, utilization of MCHWs for delivery care remains little lower as people still prefer TBAs or other local women to assist their deliveries.

- Among MCHWs, 80% of them had received referred cases of ANC from TBAs/FCHVs/VHWs followed by 47% of delivery cases. However, less than a third had received referred cases of PNC or newborn cases.
- There has been significant increased in caseload in both intervention area. The increment was higher in delivery cases (216% and 113%) followed by ANC (129% and 172), PNC (60% and 146%) and newborn (224% and 56%).

## **Other Issues**

### Problems and suggestions for improvement by MCHW

- Lack of physical facilities (59%) was the most frequently cited problem faced by MCHWs in providing MNC and OFAC services, followed by inadequate supplies of medicine and equipment in SHPs (52%) and inadequate supervision (44%). The percentage that said that inadequate training was a problem fell from 75% to 38%.
- The most often given suggestions for improving MNC and OFAC services were: intensive community awareness program (47%), selection of MCHWs from the local community (26%), and frequent supervision (31%).
- Child marriage was also common in the community. Some of the health worker's suggestion was to improve maternal and child health through completely stopping the practice of child marriage in her village.

## **BEOC Kit Box**

- Almost all (97.2%) of the MCHWs found the BEOC kit useful and 94.4% always used the kit.
- Majority (89%) of the Kit box were complete (>26 items/among 32 total items).
- 39% reported problems with the kit, which primarily included problems in refilling the kit box, difficult to carry in emergency, and the equipment are frequently out of order. 83.3% said that they refilled the kit with money from the clients while the rest refilled it using their own money.

- All of the kits included stethoscope, BP set, Fetoscope, artery forceps, cord cutting scissors, rubber catheter, plastic apron, kidney tray, and disposable gloves

## 4.2 Summary findings according to OR Protocol

### 4.2a Training site findings

MCHWs competency in MNC/OFAC during their training course was assessed using following variables

MCHWs passed the examination: 100%

MCHWs successfully demonstrate normal deliveries at maternity training site: 91% (ref 3)

### 4.2b Findings from current study

#### MNC and OFAC service

FOR MOTHER. (Observed N = 8)

S. No	Procedures	MCHWs successfully demonstrated the skill
1.	<b>Provision of IM Oxytocin</b>	<b>100%</b>
2.	<b>Uterine massage</b>	<b>75%</b>
3.	<b>Controlled cord traction (CCT)</b>	<b>96%</b>
4.	<b>Provision of IM antibiotics</b>	<b>67%</b>
5	<b>IV infusion</b>	<b>89%</b>
6	<b>Emptying bladder (catheterization/self)</b>	<b>100%</b>

IMMEDIATE NEWBORN CARE (Observed N= 8)

S. No	Procedures	MCHWs successfully demonstrated the skill
1	<b>Attention to breathing and resuscitation</b>	<b>75%</b>
2	<b>Thermal protection and warming</b>	<b>100%</b>
3	<b>Immediate breastfeeding</b>	<b>100%</b>
4	<b>Cord care</b>	<b>100%</b>

POSTNATAL CARE (Observed N= 15)

S. No	Procedures	MCHWs successfully demonstrated the skill
1	<b>Recognition and management of complications</b>	<b>80%</b>
2	<b>Distribute Vit. A 200,000 IU</b>	<b>96%</b>
3	<b>FP counseling</b>	<b>96%</b>

## Target and achievement of MCHW Operation Research

S.No	Service	Target	Achievement
1.	Availability of BEOC service in SHPs through trained MCHW.	70%	92% (SHPs)
2.	MCHWs competency in OFAC service	70%	90%
3.	MCHW successfully demonstrate prenatal care		80%
4.	MCHWs successfully demonstrate two or more OFAC procedure		100%
5.	Competency in Immediate newborn care	70%	95%
6.	Increase in number of ANC, delivery, PNC and newborn care service (caseload)	200%	140% 151% (ANC) 165% (Delivery) 103 % (PNC)

### 4.3 Recommendation

Based on the results and discussions of the Operational Research Study following recommendations have been made for further improvement of the MNC and OFAC program and 45 days refresher training based on new RH Curriculum in Nuwakot and in other similar communities.

#### 1. Continue the refresher -training program to the MCHW and other HW

Because of the continue training program and supportive supervision to the MCHWs in Nuwakot District, the knowledge and skill of the MCHWs has markedly increased over time which has directly improved the service utilization among mothers. However, to give the continuity in quality and coverage of MNC and OFAC service to the mother and children in the community, the refresher training and supervision must be continued in the areas where the MCHW's coverage is low, such as delivery service and neonatal care. Once they are competent enough, they will be able to provide quality care with limited supervision from DHO. However, frequent refresher training is necessary to update the knowledge and skill of MCHW, as methods and medical technology changed.

Training and supervision program may need little modification onward. Since the MCHW has shown low coverage on delivery service, they should focused and facilitate for this service in the community. MCHW's roles and responsibilities to be clarify to the community. In some VDCs,

MCHWs are rather busy in providing other primary health care services than to provide MNC and OFAC service. The reasons for role conflict may need to be further explored.

According to current findings, other health workers such as AHW, TBA and FCHV are also contributing a significant amount of effort in providing MNC and OFAC service to the women and children in the village. Some time because of the community's preference and due to unavailability and unaccessibility of MCHW. Considering the point that difficult terrain, distance, and scattered population in the village, one MCHW is not enough to provide service to all, especially in emergency situation.

Findings suggested that the 45 days refresher training has been proved as an important intervention strategy to enhance MCHW's performance skill, confidence, job satisfaction, and morale value which is reflected through improved overall service quality and coverage.

## **2. Construction/repair the building and minimum supply of equipment and medicine**

In most of the VDCs, the SHP's buildings are not in a working condition. Many of the SHPs had previously been housed in the VDC office, but it had been burned down or destroyed by the Maoists and while services were been run out of a local school, there was a need for a building for the SHP.

There is a lack of furniture and equipment such as examination bed, table, chairs, BP instrument and other essential supply. To construct or restructure the building and better supply is the most important and immediate need of MCHW and other health workers to provide basic health service in the community.

## **3. Community awareness creation program**

Community awareness program should be emphasized on the importance of maternal and child health issue. Although this program has been included in BCC activities, the coverage may need to widen. The role of MCHW and AHW should be clarified to the community and as well as to the health workers. There was an evidence of role conflict among health workers themselves. Lack of knowledge about MCHW and their role in the community hampering the service utilization among mothers.

Community leaders also suggested awareness creation programs and to extend the BCC training to AHWs, MCHWs, and VHWs. The message can be disseminated through the school health program and further community education.

## **4. Sustainability of the program and payment system for the service**

Built up a network/bridge between different health workers, community people, GO, INGO and NGO to render effective MNC and OFAC service.

Majority of the community people are willing to pay for the MCH service thus rate must be fixed by Government side or any other reliable sources.

Availability and accessibility is the main issue in present study. MCHW must be selected from the same VDC and residing near to the SHP. More than one MCHW should be trained in one VDC. Selection process of the MCHW should be fair, they should be service oriented and committed person.

Proper monitoring and supervision and follow up after the training from DHO should be continued. Reward system should be established.

## References

1. Department of Health Services (2001/2002). Annual Report. Ministry of Health. Kathmandu, Nepal.
2. Ministry of Health. *Nepal Family Health Survey 1996*. Kathmandu: Family Health Division, Ministry of Health, 1997
3. Save the children US, Nuwakot. A report on integrated reproductive health refresher training of maternal child health worker- late intervention areas, Nuwakot. Sept- 2001- Jan 2002.
4. SC/US. Baseline Assessment Report of selected health facilities of Nuwakot District. Report submitted by Mrs.Munu Thapa. 2002.
5. SC/Nuwakot District. Cooperative Agreement FAO-A-00-99-00049-00, 30 September 1999-2003. Partnerships in the Hills of Nepal for Maternal and Child Survival Through Local Women Health Workers. CS-15 Detailed Implementation Plan Submitted to USAID/BHR/PVC. 31 March, 2000.

**ATTACHMENT G**

**Capacity Assessment Report: Save the Children Federation**  
**SEPTEMBER 2003 FINAL EVALUATION**

Because of significant security concerns at the time of the Final Evaluation, the FE Team was not able to travel to Nuwakot. Therefore, the results recorded here were based on interviews of SC/Nuwakot and SC/Kathmandu staff held in Kathmandu.

***Given scale between 0-5 signifies:***

- 0) Informal talk has been going on and members have realized its importance but it is not in action;
- 1) Just initiated the action and moving slowly;
- 2) There is some progress that can be seen on paper and in action/field;
- 3) Taken as policy and members are committed. First draft documentation is available. It has been shared with other organizations;
- 4) Final draft has been produced. There is progress and actions are continuous;
- 5) Established as system and production can be seen as impact/outcome.

Organizational Development

Components	0	1	2	3	4	5	Remarks
<b>Organizational best practices on human resource or leadership development:</b>							
<ul style="list-style-type: none"> <li>• Staff</li> </ul>			2			5	<ul style="list-style-type: none"> <li>➤ Current SC CS project staff in Nuwakot include CS Coordinator, Education Officer and the District Program Manager, In Kathmandu it includes the Health Team Leader, Senior Program Officer, the Education Team Leader and the IEC Official. The staff in Nuwakot have been cut back in preparation for the project phase out.</li> </ul>
						5	<ul style="list-style-type: none"> <li>➤ The only position that has experienced turnover was the CS Coordinator, who left SC to return to school.</li> <li>➤ Informal plans are in place to transition all the other CS staff into other positions, except for the District Program Manager who will remain.</li> </ul>
<b>Organizational best practices on sustainability :</b>							

<ul style="list-style-type: none"> <li>Plan for financial sustainability</li> </ul>				4		<ul style="list-style-type: none"> <li>➤ The 50% match required for this CS cooperative agreement has been covered through SC's sponsorship program.</li> <li>➤ The program was designed in such a way that the financial requirements to continue project-related activities and services beyond CS-15 were minimal. These are essentially limited to the resupply of BOEC kits and cotrim stocks.</li> </ul>
<ul style="list-style-type: none"> <li>Plan for social sustainability</li> </ul>				4		<p>SC has worked in partnership with the local chapter of the NRCS and the DHO to build and strengthen relationships between the health care system and the communities through a variety of interrelated strategies (BCC, cotrim sale, capacity building/training of health workers, education of traditional healers, etc.).</p>
<ul style="list-style-type: none"> <li>Plan for program sustainability</li> </ul>				3		<ul style="list-style-type: none"> <li>➤ SC currently has plans to continue to work with the DHO, the DEO and NRCS in Nuwakot on a school health and nutrition program which would be a mechanism for continuing to remain connected with and support the CS-15 program partners and by extension, the CS-15 program activities and services. This is in addition to the other programs it has in Nuwakot (Early Childhood Development, Primary School Education, and Adolescent Development). The future of this project, and SC involvement overall in Nuwakot, is going to be determined largely based on the security situation in the District.</li> <li>➤ See phase over plan section below.</li> </ul>
<b>Organizational best practices on networking system:</b>						
<ul style="list-style-type: none"> <li>Donors meeting,</li> </ul>					5	<p>SC has maintained a good relationship with USAID/Nepal, which has provided TA, helped to identify funding sources, participated on the project's MTE, visited Nuwakot, and attended debriefings on the project.</p>

• Community meeting,						N/A	SC's direct contact with the community is limited as per the program's design. This is the primary responsibility of the two partners – NRCS and the DHO.
• Line agencies meeting			2				Meetings with NRCS and the DHO at the health facility level were done consistently throughout the project. However, this was not mirrored at the senior project management level after the first year of the project.
• Special meeting with target groups children/women)						N/A	See above.
<b>Organizational best practices about personnel:</b>							
• Organogram exists,						N/A	Not necessary at this stage of the project due to the cutback in staffing over the past six months.
• Job description,						5	All staff have job descriptions.
• Performance appraisal,						5	Performance appraisals are done every September as required in organizational policy.
• Staff hiring procedure,						5	Vacancies have been announced in national newspapers. Oral and written assessments are carried out among shortlisted candidates. Orientation to selected candidate is part of staff hiring process. Staff hiring is done by the HFO.
<b>Planning documents exists:</b>							
• Strategic plan,						5	The DIP is the project's overall plan and there were no significant changes made to it during the course of the project.
• Phase-over plan			2				The program partners need to develop a detailed phase over plan specifying which program activities continue and how, clarifying who is responsible and a timeline.
<b>Organizational best practices on training:</b>							
• Proposal writing,				3			SC staff in Kathmandu and Nuwakot have had several opportunities to develop concept papers and proposals during the CS-15 project.
• Orientation training,						5	SC/Nepal has an orientation package that is provided to new employees by SC staff from Kathmandu. This is provided both in the capital city and in the field, depending on the number of attendees.

• Organization and management,						N/A	SC's CS staff have not received training in these areas.
• Leadership,						5	The current District Program Manager, who has been spending 50% of his time on this project, has ten years of relevant experience.
• Grant management						5	SC Nuwakot has at least ten years of experience managing multiple grants across several sectors of development – health, education and economic opportunity.
<b>Organizational best practices on exposure/cross visit plan:</b>							
• Internal,						5	The CS-15 project staff from SC visited two other CS projects in Nepal.
• External					44	5	CS-15 staff attended the CORE IMCI conference in the US, the CS-15 DIP review in Washington, and the SC annual PLG meetings.
<b>Equipment exists:</b>							
• Vehicle						4	The project had one four-wheel drive vehicle which SC will be keeping. The two motorcycles and one bicycle will be provided to the DHO and NRCS. (Plans for the dispensation of these vehicles need to be incorporated into the Phase Out Plan.)
• Computer						4	The 4 desktop computers, 1 laptop and 2 printers will be given to the DHO and NRCS. (Plans for the dispensation of this equipment needs to be incorporated into the Phase Out Plan.)
• Office furniture						4	The office furniture will be provided to the DHO and NRCS. (Plans for the dispensation of this furniture needs to be incorporated into the Phase Out Plan.)
• Training equipment						4	The project's TV, overhead projector and black boards will be donated to the DHO and NRCS. (Plans for the dispensation of this equipment needs to be incorporated into the Phase Out Plan.)
<b>Organizational best practices on meeting and advocacy:</b>							
• Joint meetings							See above under heading "Line Agency Meetings"

• Publications						5	Annual Project Reports, MTE and OR reports.
• Dissemination						5	Publications listed above are disseminated to other PVOs in Nepal and through the CORE Group and SC's other CS projects worldwide. They are also shared with other PVOs, project partners, government agencies, and donors in Nepal.
<b>Organizational best practices on administration:</b>							
• Decision making process exists					4		Sector Officers consult with the District Program Manager and Program Officers before decision making as per need.
• Delegation					4		DPM and all Sector Officers delegate authority to toher staff during their absence.
<b>Organizational best practices on grant management:</b>							
• Plan to manage different grants					4		Sector Officers manage different grants at the district level in consultation with the DPM and HFO senior management.
• Financial policy						5	Follows HFO financial management policies.
• Audit plans and practice (internal/external)					4		External and internal audits are done of both SC and NRCS financial management systems.
<b>Others:</b>							

### PS (Program Strengthening)

Components	0	1	2	3	4	5	Remarks
<b>Organizational best practices on technical skills:</b>							
• District Program Manager					4		The DPM has been working with SC for 11 years and has experience in community development programs, through the PCB and direct implementation approach.
• Education and Child Development Officer							The Education and Child Development Officer has been working with SC for 18 years and experience in Early Childhood Development programs.

• Organizational Development Officer						N/A	This position is no longer part of the CS-15 project.
• Reproductive Health Officer						N/A	This position was moved to NRCS.
• Admin and Finance Officer					4		Experience in administration and finance.
• Monitoring and Documentation Officer					4		This and the Health Officer position (below) were combined after the CS-15 MTE into the CS Coordinator. The current CS Coordinator has 11 years of experience in CS programs.
• Health Officer					4		See above.
<b>Organizational best practices on research:</b>							
• Baseline studies,						5	A Health Facility Assessment, Organizational Capacity Assessment of each of the partners, and several qualitative assessments including FGDs and PLAs were implemented at the baseline.
• Operation research,						5	An OR study was implemented and report completed on the sale of cotrimoxazole by FCHVs
• Pilot study					4		The project's use of phasing was in effect a pilot study, whereby the lessons learned during Phase I were used to inform the strategies and approaches used in Phase II.
<b>Organizational best practices on documentation:</b>							
• Record and Reporting					4		District prepares progress reports on quarterly, semiannually and annual basis. Prepares report of additional activities carried out in the project area, if any.
• Meeting minute format,					4		Meeting minutes are reportedly being taken, reported on, and used to review issues and action items from previous meetings
• Filing system,					4		Filing system (including hard and electronic copies) has reportedly been developed as per sector programs.
• Means of verification.					4		The project partners developed a reporting format tied to the project objectives from the DIP.
<b>Organizational best practices on program development:</b>							
• Program objectives						5	The program results and objectives were clearly articulated in the DIP and did not change over the life of the project.

• Implementation strategy,					5	Implementation strategies were clearly defined in the DIP and used to implement the project.
• Activities and indicators,					4	The program activities and indicators were clearly defined in the DIP and did not change during the project.
<b>Organizational best practices on monitoring and evaluation:</b>						
• Standard formats,					4	Standardized quarterly and annual reporting formats were used during the project.
• Observation checklists,					4	The project adapted MOH standardized checklists.
• Regular monitoring plan,					4	Staff works based on jointly prepared activity plans.
• Monthly/weekly and daily plan of action,					4	See above.
• Time sheet,					5	Time sheets are completed and submitted by staff as required to receive pay.
• Evaluation plan (internal/external).					5	The evaluation teams for both the MTE and FE included participants from the government, the project and from outside of the project.
<b>Organizational best practices on PLG:</b>						
• Plan to modify learning attitude/ behavior,					4	SC Nuwakot staff participate in SC's annual PLG held for Nepal and representatives from the Kathmandu office attend the international PLG annual meeting held in the US.
• Uptake or new initiation,					4	PLA was piloted by SC elsewhere in Nepal and then adapted and used in Nuwakot.
<b>Organizational best practices on community mobilization:</b>						NRCS along with the DHO are primarily responsible for community level activities in the CS-15 project, while SC's role is primarily supportive and provision of technical assistance.
• Community mobilization,						
• Social mobilization,						
• Community participation/ contribution)						
<b>Organizational best practices on gender sensitivity:</b>						
• Plan to increase women involvement in staff		1				At the district level all three current SC CS-15 staff are male. Both the CS-15 staff in Kathmandu are female.

<b>Organizational best practices on ethnic diversity:</b>							
<ul style="list-style-type: none"> <li>Plan to involve different casts and groups in staff,</li> </ul>		1					This is included in the organizational policy, however, it has been difficult to achieve because of the lack of skilled minority/lower caste candidates for technical positions.
<b>Organizational best practices on program meeting:</b>							
<ul style="list-style-type: none"> <li>Program policy formulation,</li> </ul>			2				The Nuwakot District Program Manager attended SC/Nepal Senior Management Team meetings when policy decisions relevant to the CS-15 project were being discussed and made.
<ul style="list-style-type: none"> <li>Program operational rules and regulations formulation,</li> </ul>					4		This is based on the SC organizational administration manual.
<ul style="list-style-type: none"> <li>Program monitoring and sharing,</li> </ul>							Addressed above.
<ul style="list-style-type: none"> <li>Program orientation.</li> </ul>							Addressed above.
<b>Others: (required TA)</b>							

**AI Capacity Assessment: District Health Office, Nuwakot**

SEPTEMBER 2003 FINAL EVALUATION

Because of significant security concerns at the time of the Final Evaluation, the FE Team was not able to travel to Nuwakot. Therefore, the results recorded here were based on interviews of DHO staff held in Kathmandu.

**Key:**

DHMT: District Health Management Team  
 HF: Health Post/Sub Health post/Primary Health Center

***Given scale between 0-5 signifies:***

- 6) Informal talk has been going on and members have realized its importance but it is not in action.
- 7) Just initiated the action and moving slowly.
- 8) There is some progress that can be seen on paper and in action/field
- 9) Taken as policy and members are committed. First draft can be seen in documentation. It has been shared with other organizations.
- 10) Final draft has been produced. There is pace in progress and actions are continuous.
- 11) Established as system and production can be seen as impact/outcome.

OD (organizational Development)

Components	0	1	2	3	4	5	Remarks
<b>Organizational best practices on networking system:</b>							
donors meeting,				•			DHO coordinates with staff of UNDP funded “drug trafficking & income generation. Close coordination with KOICA (Korean Overseas International), which has appointed a volunteer to work within DHO.

Components	0	1	2	3	4	5	Remarks
community meeting,						•	Meetings with HP staff In-charge are held monthly in district office at Trishuli. Monthly meetings are held with HP and SHP staff. Minutes are available (not seen) Meetings are also held with the community drug fund members regularly in the 37 facilities out of 61 where this program is going on.
line agencies meeting						•	DHO regularly attends inter-district meetings. A forum where coordination and information sharing are carried out between DHO, DOE, LDO, CDO, and DAO. DHO attends CORE group meetings arranged by SC/US and NRCS. These meetings were planned to be held regularly, but were held occasionally. DHO attends meetings to discuss problems and share information, and to plan monitoring and supervision visits and training.
special meeting with target groups (children/women)						•	Monthly Mothers Group Meetings facilitated by FCHVs are attended more regularly as compared to the previous time. VDC meetings are attended regularly and more frequently especially to plan NIDS and MNT campaigns. These meetings are arranged by VHWs. Notes/minutes are available (not seen). Due to insecurity in Nuwakot sometimes these meetings are cancelled because the VDC members are not available.
<b>Organizational best practices about personnel:</b>							
organogram exists,						•	DHO organogram is posted on the office wall. It shows relationships and hierarchy among DHO staff. Some positions are not filled as per requirement.

Components	0	1	2	3	4	5	Remarks
job description,						•	DHO has standard set of JD developed by MOH. All staff have JDs. (not seen)
performance appraisal,				•			Staff evaluation is carried out annually. System for staff performance is mostly based on data collected during monitoring and supervisory visits and from the facility registers. (not seen)
staff hiring procedure,						•	All appointments are made by public service commission.
<b>Planning documents exists:</b>							
strategic plan,						•	District Health Office follows national program strategies (i.e. national RH, Vitamin A, NID strategies) to implement health program in the district. Some new interventions have been added (IMCI, BEOC/MNC, CCM, BPP and mass deworming).
Project planning						•	DHO has prepared annual program plan for F/Y 2003/2004 (not seen), which is still being computed. During the CS15 project, data from the baselines, PRA and HMIS was used for the planning purpose. Active involvement of community members such as VDC and members of Mothers groups is required especially for planning NIDS and vitamin A distribution. DHO will forward annual program plan to regional health office for finalization.
<b>Equipment exists:</b>		•					DHO shares equipment/vehicle maintenance problems faced by them due to lack of budget. Mostly they experience maintenance problem of tire and tubes of the vehicle. This area still suffers due to budgetary constraints.
vehicle,						•	Motor - 1, motorbike – 3

Components	0	1	2	3	4	5	Remarks
computer						•	Computer with printer - 1, Fax machine –1. The computer is a very old model. Need one newer/faster computer. Need BCC equipment/supplies (video camera, tapes, etc.) to continue to promote BCC
office furniture						•	Adequate furniture at the office
training equipment						•	Need tools (video, tapes) to continue to promote BCC Screen and an old video deck 1 (condition not seen)
<b>Organizational best practices on meeting and advocacy:</b>							
joint meetings						•	DHMT is in place and functioning comparatively better than before. HF's (HF with drug scheme program) organize meetings among committee members more regularly than before. Meet drug management committee members in 37 health facilities with this program. Meeting with VDC/DDC is regular with occasional interruptions due to insecurity. Health program plans are shared with VDC/DDC members and local leaders when possible.
publications				3.5			DHO publishes calendar to disseminate health key messages annually. Posters with messages on NIDs, MNT and FP are printed. Budgetary constraints restrict their ability to print sufficient quantities.
Dissemination					•		Program achievements are shared during district/VDC level meetings annually. Insecurity situation affects this occasionally.

Components	0	1	2	3	4	5	Remarks
<b>Others:</b> Health post and sub health posts buildings Storage							• SHPs are available in 80% of the VDCs. VDC have funded the construction.

**PS (Program Strengthening)**

Components	0	1	2	3	4	5	Remarks
<b>Organizational best practices on technical skills:</b>						•	45 CMAs, 3 SN, 10 ANM and 4 HA received 7 day training on RH. 9 day training on CB-IMCI, organized by DHO with the help of NRCS. 53 MCHWs received MNC/RH/BEOC training funded by CS15.
Doctor				3.5			3 doctors in district hospital and 3 posts are vacant. Recruitment is not in the hands of DHO. DHO attended IMCI workshop in Baltimore (funded by Sc/US)
Public Health Officer						•	1 Public Health Officer (no vacancy)
FCHV						•	1007 FCHVs are trained by the DHO New FCHVs are recruited but basic training is pending.
TBA	•						240 trained TBAs are in place in the district. TBA training is not on agenda. DHO recommends TBA training to promote referral of ANC, PNC clients.
Staff Nurse				2.5			4 SNs were recruited. Now 1 SN is in hospital, 1 in PHC, 1 left to join NRCS for CS15 and 1 for further studies. In total 2 SNs in place. Plans to recruit new SNs is not in DHO's hands.
MCHW						•	There are 53 MCHWs in the district who are trained in MNC/BEOC
VHW						•	58 VHWs in the district
HA						•	6 HAs in place
CMA						•	51 CMAs in place

Components	0	1	2	3	4	5	Remarks
ANM					•		11 ANMs in place
<b>Organizational best practices on research:</b>							
baseline studies				•			DHO carry out assessments during epidemics in the district. DHO staff took part in CS15 baseline assessments (IFA) and PRA of existing practices of communities re MNC.
operation research					•		DHO staff engaged in two CS15 related ORs (CCM by FCHVs and BEOC services by MCHW).
pilot study							
<b>Organizational best practices on documentation:</b>							
Well functioning record and reporting system					•		<b>DHO mentions 60% reporting by SHP to HP and 100% HP to DHO.</b> DHO work with IHMIS for record keeping and reporting. DHO trained all staff on revised IHMIS.
meeting minute format follow-up plan					•		DHO staff keep minutes of all meetings that are held at district, Ilaka and VDC level. (Minutes not seen). Some on-the-spot feedback is given to staff and community members
Well established filing system					•		Filing system is in place. Still needs some improvement and it needs to be made more systematic. Need to computerize data system.
Documentation up-dated according to means of verification					•		DHO prepared annual report using current records and uses sets of indicators for each program for the reporting purpose. Data is also gathered from NRCS office to see progress on CS15 related indicators
<b>Organizational best practices on program development:</b>							

Components	0	1	2	3	4	5	Remarks
program objectives							<ul style="list-style-type: none"> <li>Follows national objectives. DHO has one staff as a focal person for CS15. DHO staff at the district office, HP and SHP level are all aware of CS 15 interventions and objectives.</li> </ul>
implementation strategy							<ul style="list-style-type: none"> <li>Follows national strategies. Participated in preparing the CS 15, DIP Participated in the implementation of CS15. Assisted in implementing CS15 MTE recommendation by allowing facility staff's time and by arranging training. Participated in a few joint supervision and monitoring field trip</li> </ul>
activities and indicators							<ul style="list-style-type: none"> <li>Adopts standard indicators prescribed by MOH CS15 indicators help achieve MOH indicators</li> </ul>
<b>Organizational best practices on monitoring and evaluation:</b>							
standard formats						•	There are sets of standard formats in use, developed at the national level. New forms for IMCI and MNT have been introduced.
Observation/supervisory checklists						•	Checklists are used to assess EPI program, IMCI and FCHV's pneumonia case management. DHO staff used exit interviews during a review. They also used observation checklist during a review. Some budgetary constraints disallow printing of checklist.
regular monitoring/supervision plan plan						•	DHO visits most of the Health Facilities annually. He and his senior staff have jointly visited on some occasions. Regular Ilaka level HP/SHP meetings are held. Due to cut down in TA/DA it is difficult to continue this practice.
monthly/weekly and daily plan of action				3.5			DHO prepares monthly plans. Plans are shared with partners (SC/US and NRCS) occasionally.

Components	0	1	2	3	4	5	Remarks
evaluation plan (internal/external)					•		DHO and his staff have participated in the CS15 MTE and Final Evaluation. DHO and his staff have assisted in the final evaluation of MCHW's performance.
<b>Organizational best practices on community mobilization:</b>							
community mobilization					•		DHO and his staff are involved in community mobilization for NIDS, vitamin A distribution, mass deworming and MNT campaigns. DHO's participation in the drug management meeting helps improve the drug scheme policy and mobilize communities to pay for the drugs. DHO facility level staff (ANMs/MCHWs) and FCHVs are involved in Mother Group meeting. DHO staff have been exposed to NRCS BCC activities to some extent.
social mobilization					•		HP/SHP management committees are formed in 37 HP/SHPs. Some constraints affect holding meetings regularly.
community participation/contribution					3.5		To date 26HP/SHP/PHC have started the drug scheme program with VDCs contribution in the district. Communities pay for the Cotrim and for MCHW kit supplies. Coverage of services such as ANC, PNC and deliveries, although rising, remain a challenge. There is a need to support CS15 BCC strategies to increase the coverage
<b>Organizational best practices on program meeting:</b>							

Components	0	1	2	3	4	5	Remarks
policy formulation				•			DHO staff participates on various national level workshops contributing on policy formulation i.e. revised policy on EPI and PHC outreach program. DHO also attends NIDS and MNT meetings.
operational rules and regulations formulation				•			DHO contributes through participating on workshops. Follows rules of GO.
program monitoring and sharing				•			Semiannual program review meeting in practice
orientation					•		DHO organizes orientation on new program/strategies to staff as per instructions from the center. (MNT/NIDS/deworming/CS15) DHO staff participated in the orientation sessions arranged by NRCS for VDC/DDC members and local leaders on new program (BPP, MNC, CCM/FCHVs role).
<b>Others: (required TA)</b>							<ul style="list-style-type: none"> <li>• Assistance to document district health program achievements, problems and opportunities.</li> <li>• Need assistance to train a pool of trainers within the existing staff. Establish a resource center for training purpose.</li> <li>• Assistance to get existing master trainers trained in BCC strategies (PHP, Mother's group), through workshops and cross fertilization.</li> <li>• Computer training for HMIS staff (Excel, MS word)</li> <li>• Tools (upgraded version-computer, video recorder/player, teaching materials)</li> </ul>

## AI Capacity Assessment Report: NRCS Nuwakot

SEPTEMBER 2003 FINAL EVALUATION

Because of significant security concerns at the time of the Final Evaluation, the FE Team was not able to travel to Nuwakot. Therefore, the results recorded here were based on interviews of NRCS/Nuwakot staff and volunteers held in Kathmandu.

***Given scale between 0-5 signifies:***

- (0) Informal talk has been going on and members have realized its importance but it is not in action.
- (1) Just initiated the action and moving slowly.
- (2) There is some progress that can be seen on paper and in action/field
- (3) Taken as policy and members are committed. First draft can be seen in documentation. It has been shared with other organizations.
- (4) Final draft has been produced. There is pace in progress and actions are continuous.
- (5) Established as system and production can be seen as impact/outcome.

OD (organizational Development)

Components	0	1	2	3	4	5	Remarks
<b>Organizational best practices on human resource or leadership development:</b>							
Staff					3.5		Staff training practice is in place and HRD system has started developing. There are now five members sub-committee. Accountant has received training on financial management. CS-15 funded positions will end in September. 13 volunteers have received proposal writing training.
General members/volunteers					●		Training, workshop, program orientation and exposure to general members/volunteers are in practice. Training opportunities are given to junior circle members too.
Executive members					●		Program orientation and exposure to executive members exist. Training opportunities are given to executive members on a rotating basis. CS15 gave leadership and proposal writing training to 13 NRCS members.

Community					•		Program orientation and exposure to Community (target group) has been given. VDC members, teachers, RC Circles and Sub-Chapters, and volunteers/members were provided orientation on CS15.
<b>Organizational best practices on sustainability :</b>							
Plan for financial sustainability					•		NRCS Nuwakot has 3 buildings, of which 2 are rented. A fourth building is under construction and will be rented out. Photocopy machine, renting out ambulance, life membership, general membership and grants from different donors are the major strategies for economic sustainability
Plan for social sustainability						•	Program orientation was given in the community. Usually approval for project activities is done during the District Seminar held at the Ilaka level and occasionally at the VDC level.
Plan for program sustainability						•	Program objectives, indicators and activities are clearly mentioned in the annual project plan. NRCS volunteers and staff have undergone a lot of orientation on CS15 and have developed the skill to develop objectives and indicators. Unfortunately they will leave when CS15 ends.
Plan for organizational sustainability						•	NRCS Nuwakot has basic structure, policies and equipment in place, which have been used for CS15 (e.g. equipment, space, telephones, motorbikes and furniture).
<b>Organizational best practices on networking system:</b>							
Donors meeting						•	NRCS continues to meet with Japan Red Cross. Also during CS15 numerous discussions/coordination with SC/US.
Community meeting						•	NRCS organized community meetings became more organized during CS-15. Their volunteer network became more sensitized.
Line agencies meeting						•	A strength of NRCS is that line agencies met on a regular basis.

Special meeting with target groups						●	Meets with communities on regular basis through members. During CS15 community contacts were established and nurtured through BCC activities. NRCS has a strong sense of the communities they work for.
<b>Organizational best practices about personnel:</b>							
Organogram exists						●	A clear Organogram exists in NRCS.
Job description						●	JDs are available for all positions and are in place. But technical staff (30) will leave once CS15 ends.
Performance appraisal				●			PER system is in place but format needs to be revised.
Staff hiring procedure						●	A clear personal policy is in place that includes a detailed staff hiring procedure. This was developed by district chapter with the help of headquarters.
<b>Planning documents exists:</b>							
Strategic/partnership plan						●	NRCS has gained experience partnering with DHO and SC/US. They feel confident in trying to replicate this type of model in other districts. Headquarters staff, executive committee members and Sub-Chapter members are trained as well. Recommended to include a member in the executive committee who is technically strong.
<b>Organizational best practices on training:</b>							
Proposal writing						●	13 NRCS volunteers received training on proposal writing. Given a little support they will be able to put one together.
Organization and management						●	Nine of the 13 executive members have received leadership management training that included organization and management.
Leadership						●	Nine of the 13 executive members have received leadership training.
Grant management			●				NRCS has managed CS15 funds. Their finance officer received training on grant and financial management, however, this staff member will leave once CS15 ends.
<b>Organizational best practices on exposure/cross visit plan:</b>							

Internal						●	Within Nepal NRCS had arranged some visits for its Nuwakot staff to see BCC and IMCI programs
External						●	Both the Secretary and President of the Nuwakot Chapter visited Sweden and Thailand. One trip was to attend a seminar/workshop on 'phase-out.'
<b>Equipment exists:</b>							
Vehicle							Two motorcycle,
Computer							Four computer (some will go to DHO at the end of CS15)
Office furniture							Basic office furniture
Training equipment							White boards
<b>Organizational best practices on meeting and advocacy:</b>							
Joint meetings						●	NRCS met with other government line agencies such as DHO, DEO, DAO, LDO, CDO.
Publications and dissemination						●	CS15 and other activity reports are regularly prepared and disseminated to DHO, SC/US and to HQ. This activity will become a low priority as most CS staff leave at the end of CS15.
<b>Organizational best practices on administration:</b>							
Decision making process exists						●	Written rules and policy exist
Delegation						●	Written rules and policy exist
Registration and renewal						●	
Constitution						●	
<b>Organizational best practices on grant management:</b>							
Financial policies exists						●	NRCS has a financial policy in written form.
Audit plans and practice (internal/external)						●	An annual internal auditing is done by headquarters. CS15 MTE and final evaluations.

PS (Program Strengthening)

Components	0	1	2	3	4	5	Remarks
<b>Organizational best practices on technical skills:</b>							
Project coordinator					•		Project coordinator under CS15 was changed three times. The existing one is NRCS staff and has 4 year experience of CS15. He will stay with NRCS when CS15 ends.
Staff Nurse					•		Seven staff nurses under CS-15 are technically sound. They have developed skills in documentation and communication. They will leave when CS15 ends.
BCC Officers					•		BCC officers under CS15 have strong experience and skills in BCC activities. They will leave when project ends.
BCC supervisors					•		Seven supervisors are technically sound (CMA) and have developed skills in BCC communication, facilitation, PLA and PHP. They will leave when project ends.
ANM					•		Seven ANMs are trained on PHC and have strong CS15-specific skills such as CDD, MNC, BEOC, FPRH and PCM. They will leave when project ends.
<b>Organizational best practices on documentation:</b>							
Record and reporting					•		Different formats exist in place such as for MNC, BCC, IMCI, FP and CCM.
Meeting minute format						•	Meeting register exists.
Filing					•		Files are maintained.
<b>Organizational best practices on program development:</b>							
Program objectives					•		NRCS prepares its annual program plan, and sets objectives, activities and indicators. Staff and volunteers have developed skills in setting impact indicators for CS15 type programs.

Implementation strategy					•	Is clearly written and followed DIP and MTE recommendations, and plans
Activities and indicators					•	NRCS staff has basic knowledge about setting indicators. They had several opportunities to learn this skill. The NRCS technical staff will leave at the end of CS15.
<b>Organizational best practices on monitoring and evaluation:</b>						
standard formats					•	Monitoring formats are done for each aspect of CS15 program.
Supervision checklists					•	Tools such as observation and exit interviews have been used to assess FCHV and MCHW. Staff is trained. But they leave at the end of the project..
Regular monitoring plan					•	Monitoring and supervision plans are developed for each quarter. Checklists are available.
Monthly/weekly and daily plan of action					•	Quarterly plans are developed and feed the monthly plans are developed.
Timesheet					•	An attendance register exists. Time sheets are used regularly. SC/US helped them develop these. Practice is very much in place.
Evaluation plan (internal/external)					•	NRCS staff and volunteers are familiar with evaluation practice of NRCS. With help of SC/US developed monitoring & evaluation plans. Followed the CS15 MTE and Final evaluations.
<b>Organizational best practices on PLG:</b>	<i>NRCS organizes sharing meeting with district line agencies still has to learn about PLG.</i>					
Plan to modify learning attitude/ behavior					•	Staff took interest in CS15 programs and demonstrated increased learning skills. All CS15 paid staff of NRCS will leave at the end of CS15.
Uptake or new initiation		•				NRCS has just joined as the member of Safe Motherhood Working Group. They are exploring new initiatives and ways to continue to provide technical support to CS15.
Best practice and lesson learned sharing					•	Documented the results of CS15. Participated in the MNC and CCM operation research. Trained staff will leave when CS15 ends.

Documentation/ dissemination					•		Annual progress reports are produced and disseminated.
<b>Organizational best practices on community mobilization:</b>							
Community mobilization					•		NRCS has been mobilizing its volunteers to achieve project objectives. NRCS staff and volunteers received several rounds of orientation and technical training (latter for technical staff). All technical staff will leave when CS15 ends.
Social mobilization				•			
Community participation/ contribution					•		Community participation and contribution continues to be part of NRCS activities. During CS15, the community through PLA, PHP and other BCC activities (dramas) increased its participation. NRCS has 30000 members now.
<b>Organizational best practices on gender sensitivity:</b>							
Plan to increase women involvement in staff					•		Most of the CS15 staff were female. They will leave when CS15 ends.
Board members	•						There is at least one female on the Executive Board. There are some female general members in NRCS.
Management					•		There are five female members in the Female Development Committee that was established 1½ years ago.
<b>Organizational best practices on ethnic diversity:</b>							
Plan to involve different casts and groups in staff	•						Majority of executive board members is from Brahmin, Newar and Chetris.
Executive board	•						
Management	•						
<b>Organizational best practices on program meeting:</b>							
Policy formulation				•			Program is overseen by the Executive Board. There is more delegation now.

Operational rules and regulations formulation			•				This depends on the decisions of the Executive Board, but more consultation goes on now in the Sub Chapter seminars.
Program monitoring and sharing					•		This was very good during CS15 project.
Program orientation						•	Exists

**ATTACHMENT H**

**COTRIMOXAZOLE-SALE ASSESSMENT  
REPORT  
IN  
ILAKA NO. 12 & 13  
NUWAKOT**

**May 2001**

**PREPARED BY:**

**Netra Prasad Bhatta  
Save the Children U.S.  
Trishuli, Nuwakot**

## Abbreviations

ARI	:	Acute Respiratory Infection
CB-IMCI	:	Community Based Integrated Management of Childhood Illness
CDD	:	Control of Diarrhea Disease
CS-XV	:	Child Survival XV
DHO	:	District Health Office
FCHV	:	Female Community Health Volunteer
FGD	:	Focus Group Discussion
F/P	:	Family Planning
HLT	:	Health Team Leader
JSI	:	John Snow International
MOH	:	Ministry of Health
NGO	:	Non Government Organization
ORS	:	Oral Dehydration Solution
PCM	:	Pneumonia Case Management
PO	:	Program Officer
R/R	:	Respiratory Rate
SC/US	:	Save the Children U.S.
VDC	:	Village Development Committee
VHW	:	Village Health Worker

# Table of Contents

	Page No.
Executive Summary	1
Introduction	3
Objectives	4
Assessment Methodology	4
Methodology	4
Assessment Tools	5
Formulation of terms for the assessment	5
Training of the assessment teams	5
Data tabulation and analysis	5
Findings	5 – 13
I. Female Community Health Volunteers (FCHVs)	
II. Interview with Users	
III. Interview with Non-users	
IV. Interview with VHWs	
Findings of Focus Group Discussions	14 – 15
Cotrimoxazole Users' Mothers	16 – 17
Non-Users' Mothers	17
Annex	18 - 19

## EXECUTIVE SUMMARY

Save the Children US (SC/US) began training and supporting female community health volunteers (FCHVs) in Pneumonia Case Management (PCM) in 1997 as a pilot project based on the previous Child Survival-XI program. Based on the success of the program, it was expanded from January 1998 into 42 village development committees (VDCs) of Nuwakot district. Currently, Save the Children US, in partnership with Nepal Red Cross Society (NRCS) and the District Health Office (DHO), is continuing to train and support FCHVs in delivering PCM at community level under the Child Survival-XV program throughout Nuwakot district, in collaboration with the Child Health Division and JSI.

SC/US carried out an evaluation in order to assess the current level of knowledge and skills of trained FCHVs and their sales of cotrimoxazole. The assessment involved cotrimoxazole users and non-users group, mother's group and VDC personnel. Focus Group Discussions and in-depth interview techniques were utilized for the assessment. The assessment particularly focused on cotrimoxazoles sales by the FCHVs, and also included data on cost effectiveness of cotrimoxazole sale and the work performance of the FCHVs.

42 FCHVs in Nuwakot, who were trained in PCM through the Child Survival-XI grant, are currently selling cotrimoxazole for treatment of childhood pneumonia, for which they receive a very small profit. The sale of cotrimoxazole improved the potential for long term financial sustainability of PCM and complements DHO efforts to introduce cost recovery at health facilities in the district. The findings revealed that the community, the users groups, the mothers groups and the Village Development Committees are all very satisfied with the PCM services provided by FCHVs.

Of 42 FCHVs trained on Pneumonia Case Management, 21 were interviewed. Of those 21 FCHVs, 6 (29%) treated 16 children under five with pneumonia in the last month. This figure indicates that their PCM caseload is light. This may be due to inadequate supervision and support, or lack of treatment seeking behavior among parents with affected children.

The findings also revealed that the FCHV's level of knowledge regarding Pneumonia Case Management is very high. One hundred percent of them reported counting respiratory rates, looking for chest in drawing and feeling for high fever in suspected cases. One hundred percent are using a sound timer for counting sick children's respiratory rates. Ninety percent of FCHVs reported advising parents to keep the child warm but not over-wrapped and clearing the nose of a child with a cold and /or cough. Sixty two percent reported of correct classification of treatment according to the age of the children.

All of the FCHVs are selling the cotrimoxazole at the rate of Rs.12 for 20 tablets and Rs.18 for 30 tablets, thereby earning a profit of Rs.2. Profits vary, depending on whether the FCHV is selling tablets individually, in packs of 20 or in packs of 30. Eleven of the FCHVs reported selling on credit. Some of them distributed the drug free of cost. But all of the FCHVs said that they would like to continue the sale of cotrimoxazole, even though they may be having some problems with distribution and cost recovery. Most of the FCHVs express a high level of job satisfaction, and would like to continue working as community health volunteers. In order to ensure their ability to do so, they need to be provided supportive supervision on a regular basis.

Of the 5 village health workers (VHWs) interviewed, more than 60 percent knew what questions to ask to aid in the diagnosis of a child who is having difficulty breathing. All VHWs knew that they need to ask whether a child's ability to breastfeed. More than 60 percent of them knew the danger signs which would require a referral. The knowledge level of VHWs is a little bit lower compared to the FCHVs. Malnutrition as a danger sign is less known by both VHWs and FCHVs. The majority of them said that PCM by FCHVs is effective and has increased the accessibility of health care services in the community. As a group, the VHWs responded positively to pneumonia treatment by FCHVs. Their only criticism was that some of the FCHVs are doing well and some are not, and that those who are not doing their jobs effectively need more attention and supervision.

Of the 10 mothers interviewed who have treated their children's pneumonia with cotrimoxazole, all had the knowledge that FCHVs were treating children with pneumonia in their wards. Of the 10 non-users, some of them also knew that FCHVs were providing pneumonia treatment services to children. All of them (100%) from both the users and non-users groups said that they are willing to pay for the cotrimoxazole tablets. They also agreed that the cost is reasonable and that free distribution would not be effective. This was also stated during a focus group discussion with VDC personnel and a mother's group. These groups also said that they appreciated the services of the FCHVs, as treatment was accessible and available. They expressed their satisfaction with the successful treatment of pneumonia by the FCHVs and their clear explanation about the disease, treatment course, health education, and the timely referrals to hospital with appropriate suggestions.

“She (the FCHV) gives five days treatment with medicine for the child with pneumonia. My son was treated by her and he was cured.” – VDC member.

All of the mothers said that they give a five-day, full course of treatment to their children they see, even though their condition often improves within 2-3 days.

Most of them said that FCHVs are conducting mothers' group meetings on monthly basis, but a few of them also expressed the concern that the mothers' group meetings are not regular. Though the FCHVs are overburdened with work, the mother's do not feel that their children's care is suffering, as they appreciate the work that the FCHVs do, and know that they are not getting paid.

Most of the interviewed participants said that they would contact one of the FCHVs first if they were seeking treatment for their child's illness. However, some preferred to take their children directly to health facilities such as the health post (HP), sub-health post (SHP) or hospital.

The non-users knew that other services provided by the FCHVs include: providing Vitamin 'A' and polio vaccines for the children, distributing Jeewan Jal (ORS), giving information on vaccines (5 doses of injections), making referrals, educating/informing for family planning, and conducting mothers' group meetings from time to time. But a few of the villagers did not know that FCHVs are providing pneumonia treatment. The most frequently cited reasons for not approaching FCHVs for pneumonia included, hesitancy of families who did not know the FCHVs personally, a preference on the part of parents to take their children to health facilities, or an inability to afford the FCHVs' services.

These findings illustrate the importance of disseminating the messages regarding pneumonia treatment and sale of cotrimoxazole by FCHVs to their peers, relatives, and neighbors. Supportive supervision by the SHP and HP staff - jointly with Nepal Red Cross Society staff is essential to help increase efficiency in the services of the FCHVs and VHWs. It is also recommended that the project team organize review workshops and assess the performance of the FCHVs on a regular basis. A continuous effort must be made to raise community awareness about the PCM services and the sale of cotrimoxazole by FCHVs. Various outlets like the VDC meetings, gatherings and supervision visits could be better utilized for information dissemination. As malnutrition is not strongly emphasized as a danger sign for pneumonia by both the VHWs and FCHVs in the status quo, it should be re-emphasized during training and orientations. Finally, there are recording and reporting system needs to be systematically updated from the community to the health facility level.

## INTRODUCTION

Save the Children US (SC/US) has been implementing the Child Survival-XV program through its partner non-government organization (NGO) Nepal Red Cross Society (NRCS) and the District Health Office (DHO) in Nuwakot since October 1999. Nuwakot is a rural hill district located northwest of Kathmandu. The Child Survival-XV program has already been implemented in 32 Village Development Committees (VDCs). The remaining 29 VDCs will be covered from October 2001 as a 2<sup>nd</sup> phase program.

The Government of Nepal, MoH had introduced the community based/integrated management of childhood illness (CB/IMCI) model in various districts of Nepal. Save the Children US initiated the CB/IMCI program in Nuwakot under the Child Survival-XV project, which focused on children under five years and women of reproductive age (15-49 years). The main goal of the program is a sustained reduction in under five and maternal mortality in the district.

The estimated infant mortality of the district in 1991 was 94 per 1000 live births, and the national average was 93. The principle causes of under five mortality in Nepal are pneumonia, diarrhea, malnutrition and birth related defects. The total population of the district is estimated about 297,000 and the total number of children in the 0-5-target population is 44,500.

SC/US began training and supporting Female Community Health Volunteers (FCHVs) in Pneumonia Case Management (PCM) as a pilot project in 1997 through the previous Child Survival-XI program. Based on its success, the project was expanded from January 1998 to cover a total 42 VDCs. Currently, SC/US, in partnership with Nepal Red Cross Society and the District Health Office, continues to train and support FCHVs in delivering PCM at the community level under the Child Survival-XV program, in collaboration with Child Health Division and JSI.

Trained FCHVs are selling cotrimoxazole for treatment of childhood pneumonia, for which they earn a very small profit. The sale of cotrimoxazole has improved the potential for long term financial sustainability of PCM and also complements the DHOs' effort to a introduce cost recovery plan at the district health facility.

Although the PCM approach has proven effective in the treatment of pneumonia, the extent to which the cost recovery burdens FCHVs or creates a barrier to promote treatment seeking behavior and the percentage of cotrimoxazole cost recovered have to be assessed.

Documentation of cotrimoxazole sale by FCHVs under the Child Survival-XV program needs to be carried out to ascertain whether this approach is a manageable program for FCHVs. Based on the results of the assessment, the program will be continued with some revision or alternative approaches will be considered.

In order to better understand the level of knowledge, practices, beliefs, and behaviour related to child-care during pneumonia in the community, a quality assessment of the cotrimoxazole sale was carried out. The tools used were Focus Group Discussions (FGD), guidelines, and semi-

structured questionnaires. The assessment particularly focused on cotrimoxazole sale by the FCHVs, and their ability to recover the cost of the tablets.

## **OBJECTIVES**

There is a need to take PCM program beyond the health facilities, reaching the poorest and most rural communities and families to bring about positive changes in practices regarding the health of children. Most importantly, the program objective is to help decrease the mortality and morbidity in under-five children. The objective for the assessment is as follows:

Document results of operational research on cotrimoxazole sale by FCHVs in order to:

- Demonstrate effectiveness of the cost recovery plan for cotrimoxazole and to provide feedback to MOH for applying the approach accordingly
  - Investigate community participation, use and satisfaction with FCHVs' cotrimoxazole sale and treatment of pneumonia so that it can be expanded more effectively
  - Explore helpful approaches to improve cotrimoxazole sale and pneumonia treatment provided by the FCHVs
  - Identify the barriers related to cotrimoxazole sale and effective pneumonia treatment by the FCHVs

## **ASSESSMENT METHODOLOGY**

The qualitative and quantitative data have been collected in the assessment area. For example, data on the number of pneumonia cases and revenue generated from cotrimoxazole sales has been collected. The following data has been obtained in the assessment of FCHV, mother's groups, and community stakeholders:

- Records of pneumonia cases treated by FCHVs – 21 out of 42 FCHVs
- DHO service records and registers
- Records of sales, stock and revenue to FCHVs
- Records of pneumonia cases treated by FCHVs for the last month
- Key informant interviews with immediate users whose children received treatment – 10 users
- Key informant interviews with non-users whose children did not receive treatment with the FCHVs – 10 non-users
- Focus Group Discussions (FGD) with users whose children received treatment – 3 groups
- Focus Group Discussions (FGD) with non-users whose children did not receive treatment
- Interview with FCHVs to assess level of knowledge, skills and satisfaction with training/supervision – 21 FCHVs
- Interview with VHVs to assess supervision skills and satisfaction with FCHVs' functioning – 5 VHVs.

## **METHODOLOGY**

Focus Group Discussions and in-depth interview techniques were utilized for the assessment. Seven VDCs, were chosen for the assessment from the PCM intervention areas of the CS-11, and 50 percent of the FCHVs were randomly selected from each VDC.

To conduct the study, the list of FCHVs was obtained from the respective areas. The focus group discussions were conducted for users and non-users in the same ward where FCHVs were interviewed. The FGD was conducted in three different Ilakas and VDCs. Each group consisted of 6-12 members. The study was done in Samundratar, Sundaradevi, Raluka, Balkumari, Gaonkharka, Routbesi, and Shikharbesi VDCs, and an attempt was made to ensure ethnic diversity of the study's participants.

## **ASSESSMENT TOOLS**

The assessment tools consisted of an interview questionnaire and a set of focus group discussion guidelines. There were three types of interview questionnaires: the FCHV interview questionnaire, the non-users & users interview questionnaire, and the Village Health Workers (VHWs) interview questionnaire. Similarly, the three types of Focus Group Discussions were conducted by means of three different Focus Group Discussion guidelines. The details of the tools are presented in the Annex 1. Previously, the tools were designed in the district and finalized by the help of the HTL (Health Team Leader), the PO (Program Officer), Dr. Tariq, Asia Area Health Advisor and Eric Starbuck, CS Specialist.

## **FORMATION OF TERMS FOR THE ASSESSMENT**

Nepal Red Cross Society recruited three Auxiliary Nurse Midwives (ANMs) and five staff nurses to form the study team. A total of four teams were formed. The Documentation & Monitoring Officer, Health Officer, Statistical Assistant-DHO, and Behavior Change Communication Officer served as team supervisors in their assigned areas.

## **TRAINING OF THE ASSESSMENT TEAMS**

Save the Children US staff member Srijana Sharma (Information Education & Communication Officer), Til Kumari Gurung (Health Officer) and Netra Prasad Bhatta (Monitoring & Documentation Officer) conducted a two days orientation workshop for the teams. The orientation included techniques of assessment, information on using guidelines, project requirements, and a brief introduction of qualitative and quantitative studies, research methods, and sampling techniques.

The teams visited “ Sukumbasi” area to field-test the questionnaires to find out whether the questionnaires were appropriate and understandable. After the field-visit, the trainers provided

feedback on the teams' performance and provided further information and made necessary corrections. The team emphasized the importance probing effectively and appropriately.

## DATA TABULATION AND ANALYSIS

The assessment team members collected information from their assigned VDCs. They used semi-structured questionnaires to interview FCHVs, VHVs, users and non-users and conducted FGDs for user mothers, non-users mothers and VDC members. The Health Officer and Monitoring & Documentation officer manually tabulated the data.

## FINDINGS

### I. Female Community Health Volunteers (FCHVs)

#### **Training and supervision:**

Of the 42 FCHVs (all of whom were trained on Pneumonia Case Management during the period of CS-XI program from SC/US), 21 were interviewed. Among them, 11 (52%) had received pneumonia case management (PCM) training within the year from NRCS under the CS-XV program. Previously, they had not been supervised or provided with regular support. There was a break in supervision due to changes in the structure and strategy of SC/US. SC/US relocated its operations and moved its' office from Samundratar, Ilaka # 12 to district headquarter Trishuli, Nuwakot and began implementing its programs through partner NGOs, due to the political instability caused by the Maoist insurgency. Due to this shift, SC/US staff were not in frequent contact with the FCHVs. This, most FCHVs suggested a regular refresher training and increased support and supervision. Several of them thought that increasing the training period would be beneficial. A few of them suggested providing some in-kind incentive to encourage them to continue their work. Two of them suggested providing bags for carrying supplies as well.

#### **Number of children under-five covered and served:**

FCHVs estimated that there are 1,444 children under the age of 5 in their 21 wards. They have been providing Vitamin A supplementation and polio vaccination in addition to pneumonia care to these children.

Out of 21 FCHVs, 6 (29%) treated 16 children under five with pneumonia in last month. This figure indicates that their PCM caseload is light. This may be due to inadequate supervision and support, or lack of treatment seeking behavior among parents with affected children.

## Knowledge of FCHVs:

**Table 1**

Questions to be asked by FCHVs	Number	Percentage
Age of child?	11	52
How long the child had a cough?	14	67
Is the child able to drink? ( 2-60 months)	18	87
Is the child able to breastfeed?	21	100
How long has the child had a fever?	18	87
Is the child lethargic? (sleepy or difficult to wake)	12	85

More than 85 percent of the FCHVs have adequate knowledge of these danger signs.

**Table 2**

Steps of assessment	Number	Percent
<b>Count respiratory rate</b>	21	100
Look for – chest in-drawing	21	100
Observe whether child is lethargic	9	43
Note whether child is malnourished	7	33
Check for high fever	21	100
Note if child has low body temperature	17	81

One hundred percent of the FCHVs reported to counting respiratory rates, looking for chest in drawing and feeling for high fever. This indicates that all of them possess a high level of knowledge regarding the danger signs. All of them (100%) are using a sound timers for counting respiratory rates. However, only 7 FCHVs reported that they regularly look for malnutrition. Thus, the need to observe a child's nutritional status should be emphasized during the refresher training period.

**Table 3**

Classification by age	Number	Percent
0 – 2 months	13	62
2- 60 months		
Do not know	1	5
Others	7	33
Total	21	100

Sixty two percent of FCHVs correctly classified the age of the children they saw. Seven of them reported incorrectly.

**Table 4**

<b>Danger signs &amp; symptoms of children under two months that warrant a referral</b>	<b>Number</b>	<b>Percent</b>
Fast breathing	18	86
Severe chest in-drawing	18	86
Not able to breastfeed	18	86
Sleepy (Difficult to wake)	17	81
Low body temperature	17	81
High fever	16	76
Others	3	14

Almost all of the FCHVs have adequate knowledge of the danger signs and symptoms of children under two months old that would warrant a referral.

**Table 5**

<b>Danger signs &amp; symptoms for children 2 two months to 60 months that would warrant a referral</b>	<b>Number</b>	<b>Percent</b>
Chest in-drawing	18	86
Not able to drink fluids	18	86
Sleepy (Difficult to wake)	16	76
Severe malnutrition	10	48
Others	7	33

The most commonly cited danger signs reported by FCHVs were chest in drawing, not able to drink, lethargy, and severe malnutrition. These symptoms require cases to be referred to the health post. The other cited signs include low body temperature, measles, wounds, and fever.

**Table 6**

<b>Home treatment for a child with cold and cough</b>	<b>Number</b>	<b>Percent</b>
Give more food than usual	16	76
Give more fluid than usual	15	71
Clear the nose	17	81
Observe for fast breathing and chest in-drawing	12	57
Encourage the mother to breastfeed more frequently	16	76
Keep the child warm but not over-wrapped	19	90
Others	10	48

Ninety percent FCHVs reported keeping their child patients warm but not over wrapped and clearing the noses of children with a cold and cough.

Treatment given by FCHVs as per the records

**Table 7**

Correct classification by R/R	Correct classification by Age	Cotrim given correctly	Follow up on 3 <sup>rd</sup> day	Recorded all correctly	Referral by 3 <sup>rd</sup> day	Causes of referral
13	13	13	13	13	1	Sleepy
11	11	11	11	11	1	Severe chest in-drawing
10	10	10	10	10	1	Fast breathing
10	10	10	10	10	1	Unable to breastfeed
9	9	9	9	9		
8	8	8	8	8		
8	8	8	8	8		
8	8	8	8	8		
5	5	5	5	5		
4	4	4	4	4		
86						

According to the records kept by FCHVs, only four FCHVs recorded 10 or more cases. Combined, they had seen a total of 86 children with pneumonia. They referred five cases to health posts, according to their treatment register. One of them mentioned that she refers to the Maternal & Child Health Worker (MCHW) or village health worker (VHW) and three of them said that they refer to the medical hall. Reviewing of their referral book revealed that a total of 23 cases were referred to health posts. This indicates that they had referred patients without recording them in the treatment register.

### **COTRIMOXAZOLE SALE AND RESUPPLY**

Out of 21 FCHVs, 10 of them bought cotrimoxazole tablets from medical halls whereas 11 of them did not. All of the FCHVs were supplied with cotrimoxazole tablets at the initial period following training. Ten FCHVs sold the cotrimoxazole tablets and bought more from the medical hall. Three of them even bought it with their own money. They generate the funds to restock their supply by selling the cotrimoxazoles to the clients. Eleven of them said that they had some difficulty for selling cotrimoxazole because community people thought that they were supposed to be provided for free and resented that the FCHVs were charging for the drug. This indicates that the community members need to be further oriented on the sale of cotrimoxazole.

All of the FCHVs are selling the cotrimoxazole at the rate of Rs.12 for 20 tablets and Rs.18 for 30 tablets, thereby earning a profit of Rs.2 per sale. Profits vary, depending on whether the FCHV is selling tablets individually, in packs of 20 or in packs of 30. Eleven of the FCHVs reported selling on credit and some of them even distributed the drug free of cost. There is discrepancy among FCHVs' sale of the tablets, because one of them sold and earned Rs.8 from

sales of 20 tablets and Rs.12 from sales of 30 tablets. However, all of the FCHVs said that they would like to continue the sale of cotrimoxazole, even though they may be having some problems with distribution and cost recovery.

The majority of the FCHVs reported that treatment of children with pneumonia and selling cotrimoxazole is a rewarding and fulfilling job. They expressed satisfaction with their work because they feel that they are doing “*Dharma*.” Some said that mothers are happy with the treatment because mothers are able to obtain inexpensive medicine for their children within the community, and do not need to travel far to obtain it.

Out of 21 FCHV, only 9 (43%) had minimum stock of cotrimoxazole (20 tablets). Among the FCHVs with insufficient supplies, they did not treated four pneumonia cases because of unavailable of cotrimoxazole, and instead sent them to the nearest health facilities.

Out of 21 FCHVs, five said that the sale of cotrimoxazole is difficult because they are rarely reimbursed. The problems encountered by FCHVs during the sales of cotrimoxazole are as follows:

**Table 8**

<b>Problems faced by FCHVs for sale of cotrimoxazole</b>	<b>#</b>
Difficulty in getting back money from those who bought on credit	7
Some of the mothers wanted cotrimoxazole to be free	5
Given on credit	5
FCHVs are blamed for selling the drug because community members thought that the drug was free of cost for distribution.	5
Some mothers do not give money	4
FCHVs must travel far to restock on cotrimoxazole tablets.	1

All of the FCHVs said that they would like to continue the sale of cotrimoxazole, even though they are having some problems. Most of the FCHVs express a high level of job satisfaction, and would like to continue working as community health volunteers. In order to ensure their ability to do so, they need to be provided supportive supervision on a regular basis.

## Mothers group meetings

Out of 21 FCHVs, only seven had conducted mothers group meeting in last month. There is an irregularity in conducting mothers' group meetings.

## II. Interview with Users

Altogether, 10 users (mothers whose children have been treated with cotrimoxazole) were interviewed. Out of the 10, eight women said that, when their child has pneumonia, they first seek care from the FCHV. One woman said that she takes her child to the Health Post first and the other woman takes her child to the traditional healer. All of them (100%) knew that FCHVs are treating children with pneumonia in their wards. In addition to pneumonia case management, they also know the work of FCHVs as follows:

**Table 9**

<b>Work of FCHVs known by women/mothers</b>	<b>#</b>	<b>%</b>
Treat pneumonia	10	100
Distribute Vitamin A	9	90
Organize mothers' group meetings	6	60
Teach ORS preparation	4	40
Distribute FP commodities	3	30
Others – delivery service/polio vaccination	9	90

All of them (100%) reported that they feel comfortable with the pneumonia treatment provided by FCHVs, including their practice of charging for cotrimoxazole tablets. They like the program because pneumonia treatment service is now easily accessible, nearby their homes and highly effective. They are also satisfied with the other services that the FCHVs provide, such as explaining clearly about the disease and treatment course, accessibility of treatment, health education and timely referrals in case of severe infections.

While asking them about their participation in the mothers group meeting, eight of the women (80%) said that they attended the meetings called by FCHVs. Two of them said it was too far away and were not informed, so they did not attend.

The majority of them knew the home treatment for cold and pneumonia like keeping the child warm and clean, keeping the nose free from mucous, giving more fluids/hot water, breastfeeding a small child more frequently and feeding them a liquid of Rudilo – (a local bitter herb). Some of them said to apply Vicks Vapor Rub on the chest, and others suggested applying juwano (*Juwano Taluma Thokne*). One woman said, “Chula ko mato pakayera bachalai khuwaune” (Boil the mud from mud stove and give it to the child to drink).

All of them (100%) said that they give the five day long, full course of treatment to their children, even though their children's symptoms improve after 1-3 days.

While asking about the cost of cotrimoxazole, all of them (100%) said that the cost of the cotrimoxazole (Rs. 12 for 20 tablets and Rs. 18 for 30 tablets) is reasonable and not expensive. It is interesting to note that, while the mothers say that cotrimoxazole is being sold at a reasonable price, information from FCHVs showed that all mothers who take the medicine for their children do not pay for it.

### III. Interview with Non-users

A total of 10 non-users were interviewed. All of them (100%) knew the FCHVs in their village, but only four of them knew that FCHVs are providing pneumonia treatment services to children. This indicates that there is a need to widely promote the services of the FCHVs in the community. In addition to pneumonia case management, non-users also know the work of FCHVs as follows:

**Table 10**

<b>Work of FCHVs known by non-users women/mothers</b>	<b>#</b>	<b>%</b>
Treat pneumonia	4	40
Distribute Vitamin A	7	70
Organize mothers' group meetings	5	50
Teach ORS preparation	6	60
Distribute FP commodities	1	10
Others – delivery service/polio vaccination	8	80

Five of them (50%) stated that the FCHV is their first point of contact when seeking treatment for children with pneumonia, while three of them said it is the health facility, two said it is the medical hall.

The women who do not use FCHVs were asked why they preferred other forms of treatment. Their main reasons were many of them were not aware of the FCHV's pneumonia assessment capacities, the medical hall is closer to them, and they lacked confidence in the treatment skills of the FCHVs. Some of them said that they only recently learned that FCHVs treat children with pneumonia.

Only four of them (40%) knew that FCHVs charge for cotrimoxazole tablets. All of them (100%) said that they were willing to pay for the cotrimoxazole tablets. They also agreed that the cost is reasonable (Rs.12 for 20 tablets and Rs.18 for 30 tablets).

The home treatments for cold and pneumonia listed by the women include: feeding the child more fluid, keeping the child warm, feeding the child Rudilo and applying it on the head of child, and giving the child leaves of Tulsi. Some of them also mentioned giving the child hot water to drink, breastfeeding more frequently, giving the child turmeric soup, cleaning the nose of a child, apply Vicks Vapor Rub on the chest, giving the child soup of Juwano, avoiding oily and spicy

food, and avoid exposing the child to smoke. Only a few listed taking the child to traditional healer and feeding him or her herbs as a potential treatment.

Out of 10, six of them had been attending mothers' groups meetings while four of them did not. Those who were not attending the meeting explained that - they did not know that FCHVs were organizing such meetings, some of them are not allowed to attend by their family heads, some said the meetings are not conducted on regular basis and some said they are busy doing domestic work most of the time. They also volunteered to inform other community members about the roles of FCHVs in their community

#### **IV. Interview with VHWs**

A total of five village health workers (VHWs) were interviewed. Most of them have been working for 8 to 23 years as VHWs. They all participated in a seven-day pneumonia case management (PCM) training during the CS 11 project period. Out of the five, three have received refresher training within the last 12 months. Some VHWs suggested extending the duration of the training period, organizing video shows as a teaching and learning exercise during training, and providing regular supportive supervision after the training. All of them were interested in taking refresher training course.

The majority of them said that PCM by FCHVs is effective. It has also increased the accessibility of health care to children in rural areas, as well. Their attitude towards pneumonia treatment by FCHVs is positive, however, it is important to note that they said that some of the FCHVs are doing well and some are poor.

#### **Knowledge of VHWs**

**Table 11**

<b>Questions to ask for the child with difficulty breathing</b>	<b>#</b>	<b>%</b>
Age of the child	3	60
How long has the child had a cough?	3	60
Is the child able to drink?	4	80
How long has the child had a fever?	3	60
Is the child able to breastfeed?	5	100
Is the child sleepy or lethargic?	4	80

Table 11 shows that more than 60 percent of the VHWs had knowledge about what questions to ask for a child with difficulty breathing. All VHWs know that they need to ask about the child's ability to breastfeed.

**Table 12**

<b>Danger signs/symptoms in children under 2 that warrant a referral</b>	<b>#</b>	<b>%</b>
Fast breathing	3	60
Severe chest in-drawing	3	60
Not able to breastfeed	5	100
Lethargic	5	100
Low body temperature	3	60
High fever	4	80

More than 60 percent of the VHWs knew the danger signs that warrant a referral to a health posts/hospital. However, the knowledge level of VHWs is a little bit lower compared to the FCHVs.

**Table 13**

<b>Danger signs/symptoms of children under 5 warrant a referral</b>	<b>#</b>	<b>%</b>
Severe chest in-drawing	4	80
Lethargic	4	80
Not able to drink fluids	5	100
Severe malnutrition	3	60
Others	1	20

More than 80 percent of the VHWs know the danger signs of children under-five that warrant a referral. Malnutrition as a danger sign is less known by both VHWs and FCHVs.

**Table 14**

<b>Home treatment for the child with a cold and cough</b>	<b>#</b>	<b>%</b>
Keep the child warm	5	100
Give the child more food than usual	4	80
Give the child more fluid than usual	4	80
Clean the nose	4	80
Encourage mother to breastfeed more frequently	4	80
Check for fast breathing and chest in-drawing	3	60
Others – feed Rudilo, avoid dust	3	60

The majority of VHWs had adequate knowledge regarding home treatment for a child with a cold and cough.

**Table 15**

<b>SN</b>	<b>Steps of Pneumonia diagnosis and assessment</b>	<b>#</b>	<b>%</b>
1	<i>Count</i> – Respiratory rate	5	100
2	<i>Look</i> - Chest in-drawing	4	80
	- Lethargy	4	80
	- Malnutrition	2	40
	<i>Measure/feel</i> - High fever	5	100
	- Low body temperature	4	80

The VHWs had adequate knowledge regarding how to diagnose and assess pneumonia by looking for the above mentioned indicators. Four of them use sound timers for counting the respiratory rate and one of them uses his watch. Four of them correctly classified the ARI cases according to age group.

### **Sale and re-supply of cotrimoxazole**

The majority of VHWs are obtaining their cotrimoxazole tablets from pharmacies. Few of them use the tablets from the health facilities as well. Four of them are not keeping records of their cotrimoxazole sales. In fact, only one of them was keeping records of his cotrimoxazole sales. His record showed that he bought 1,000 tablets of cotrimoxazole, and paid Rs. 550. He sold 900 cotrimoxazole tablets and earned Rs.540. He still had 100 tablets left at the time he was

interviewed. He treated 16 children aged 2 months and below and 20 children aged 2–60 months.

Most VHWs said that the community people were under the impression that FCHVs were getting cotrimoxazole tablets free and were then selling to them for profit. Community people need to be better informed about the cost recovery program to alleviate this misconception. Some village people also believe that traditional syrups cure pneumonia better than cotrimoxazole tablets.

### **Supervision to FCHVs by VHWs**

VHWs ask FCHVs about their problems and talk about possible solutions; check the records for treatment, referrals and make suggestions for improvement; count remaining cotrimoxazole tablets; encourage them to conduct mothers' group meetings; observe the assessment of pneumonia and filling of records; and provide technical assistance, if needed.

Three of the VHWs collected monthly reports from 12 of the FCHVs. Out of 12 FCHVs, they found only eight maintained proper record keeping procedure. VHWs need to be encouraged to collect reports on a regular basis and FCHVs need to coach them on proper recording methods, if they are literate. Those who are not literate need to get help from others like family members, so those who are helping with recording need to be coached as well.

### **RECCOMENDATIONS**

1. The Nepal Red Cross Society, District Health Office (DHO) and SC/US need to prepare a supervision plan and provide supportive supervision to FCHVs and VHWs on a regular basis.
2. Organize a joint review workshop with Nepal Red Cross Society and DHO to refresh their skills on a monthly basis for the first three months, then a bi-monthly refresher for six more months and then on a quarterly basis for one quarter. During the review workshop, Partner NGOs will assess the performance of FCHVs and VHWs and provide on-the-job coaching. After the training is complete, they will re-assess the performance of the FCHVs.
3. The community people (mothers, caretakers, family decision-makers) should be orientated on the sale of cotrimoxazole tablets by FCHVs through various outlets including VDC meetings, gatherings and supervision visits. There should be continuous effort to disseminate the message on pneumonia case management by FCHVs at the community level.
4. Both the VHWs and FCHVs fail to recall malnutrition as a danger sign, so it should be emphasized during the refresher and review meetings.

5. VHWs need to be encouraged to do monthly report collection and refresh their knowledge, particularly on what questions to ask for children with difficulty breathing and on recognition of danger signs and symptoms.
6. Recording and reporting systems need to be updated from the community level to the health facility level.

## **Findings of Focus Group Discussions**

### **VDC members:**

Most of the VDC members knew the names of the FCHVs serving in their communities. They appreciated the work of the FCHVs and also mentioned that their roles are: treatment of pneumonia and referring cases to the health posts/sub-health posts/hospital when necessary; distribution of Vitamin A to under five children; polio vaccination for children under five; health check up for children; delivery services; and motivation for immunization and antenatal care. Some of them said that they also distribute Jeewan Jal (ORS) to children with diarrhea. Very few mentioned the mother's group meetings organized by the FCHVs. The majority of them were satisfied with the performance of the FCHVs.

One VDC member said, "She (the FCHV) gives five days treatment with medicine for the child with pneumonia. My son was treated by her and he was cured."

The VDC members said that the FCHVs are interested in serving the community. They said that because of their interest and dedication, the FCHVs show willingness to serve and help without any hesitation, even in a difficult situation. One VDC member said, "She comes to our house in case of need leaving her work at her home. She informs us about the Vitamin "A" campaign and polio vaccine. She is doing good job."

Many of the VDC members reported the health post as the first place they would go to seek pneumonia treatment services. Few of them said that they would contact FCHVs first for pneumonia treatment. One VDC member said that the FCHV only has cotrimoxazole tablets and he prefers the syrup form for his child. He feels that tablets are less effective compared to syrup, so it is better to get tablets free than to pay for them.

They reported that FCHVs are holding mothers' group meetings occasionally and give health education on pneumonia, control of diarrheal diseases, immunization, family planning, and antenatal care. However, two of the VDC vice chairpersons were unaware of the mothers' group meetings.

Most also said that the treatment of pneumonia and the selling of cotrimoxazole by the FCHVs is effective. They said that the treatment is cheaper with this service, is accessible to community people, and people get treatment on time. One of the VDC members said that free distribution will have a negative impact. It is because free will not lasts long.

While asking about the home treatments for cold and pneumonia – some members mentioned boiling rudilo (herbs), leaves of lemon, turmeric, mud from mud stove, salt, and Kamal Kotiko gurd (Insect's house made of mud) with water and giving to children with cold/cough and pneumonia. In addition to these remedies, they also mentioned several other traditional methods, like boiling of Asura with water and giving it to the child to drink, taking hot water steamed with Suicho (Chinese Vicks), keeping the child away from dust and wind, and feeding him or her ginger soup. One of the members said that members of the Tamang ethnic group prefer to send their children to the traditional healer. They visit traditional healers first and traditional healer sacrifices one to two cocks and a goat and then child is taken to the health post. One of the members said, "Apply the Rudilo and put the bone of tortoise into the water then apply it to the chest, if the child does not improve." These anecdotes all indicate that the VDC members do believe in traditional methods and did not know well about the home treatment. The VDC members are influential people in the community, so they need to be informed about proper home treatment and role of FCHVs.

Many of the VDC members feel that FCHVs are over burdened and are not getting any incentives, as they are volunteers. All the government and non-government agencies give them the responsibilities. They also mentioned that some FCHVs are doing more than the staff members who are paid a salary of Rs.4000 – 5000. The FCHVs have approached the VDC for allowances, but have been turned down. Now, many VDC members feel that FCHVs should get additional benefits.

All of the VDC members are very satisfied with the FCHVs' treatment of children with pneumonia, because children are receiving services at the home level and pneumonia is being cured by the medicine provided by FCHVs. One of the members said, "The tablet is less effective compared to the syrup, but her (the FCHV's) treatment is better." Another member was not sure about the effectiveness of the cotrimoxazole tablets. Overall, the members felt that cotrimoxazole sale was beneficial to their community. One of the members mentioned that FCHVs should sell at the same rate as the wholesale price. Another member argued that, "compared to the medical hall, the profit is nominal and the price is appropriate". They recommended that the FCHVs have an adequate stock of cotrimoxazole at all times. They also suggested that the supply system link with the sub-health post for the convenience of the FCHVs. Finally, they articulated their willingness to help manage the sales and re-supply of cotrimoxazole in their villages.

Their final suggestions included providing regular refresher training to FCHVs, supervising them frequently, providing them with incentives for motivation, and help from VDCs. One of the

members said, "We (the VDC) should come and help her (the FCHV) during her mothers' group meeting." The members also volunteered to encourage community members to take their children with pneumonia to FCHVs for treatment. Another member said, "We should be familiar with the work of FCHVs."

## **Recommendation**

- The VDC members need to be re-oriented about the role of FCHVs in treating children with pneumonia, the effectiveness of cotrimoxazole, the sale of these tablets, home treatment and their roles and responsibilities in supporting the FCHVs, including providing incentives.
- Re-supply and refilling system of cotrimoxazole/jeevan jal (ORS) should be convenient either through the drug scheme program or HP/SHP revolving fund.

## **COTRIM USERS' MOTHERS**

All of the mothers of children who have taken cotrimoxazole know the names of the FCHVs and also know what type of volunteer work they are doing in the village. Most of them mentioned that FCHVs distribute vitamin 'A', raise awareness about immunization, suggest health check-ups, give polio vaccines, provide check-ups for the child, provide pneumonia treatment, check fever, provide check-up for antenatal mothers, organize mothers' group meetings, provide treatment for wounds and injuries, provide medicine for fever, distribute Jeewan Jal (ORS), assist in delivery, and motivate mothers for antenatal check-ups.

The mothers perceive that the FCHVs are interested in their work, and are always willing to visit them in case of need. The mothers' groups have a very positive impression of the FCHVs, as they give medicines to their children when they are sick. They also do home visits and inform people about routine immunization, polio vaccines and Vitamin 'A'.

All the mothers know that the FCHVs are providing treatment for pneumonia. One of the mothers said, "My child got pneumonia treatment from her (the FCHV)." FCHVs also make referrals and send the child to nearest hospital, if needed. They said that nowadays they are taking their children with pneumonia to FCHVs for treatment. Before that, FCHVs used to take children to traditional healers, but now they rely on hospitals and health posts. Most of them said that FCHVs are organizing mothers' group meetings on a monthly basis. They also said that they inform them a day before for the meeting. They give health education about ARI, CDD, F/P etc. A few women expressed the concern that the mother's group meeting is not very regular. One woman said, "She conducted a mothers group meeting on Magh (3 months back). Some people attended the meeting, whereas some did not know."

The mothers expressed their positive impressions about the pneumonia treatment provided by the trained FCHVs. They all knew that FCHVs are charging only Rs.12/- for 20 tablets and Rs.18/- for 30 tablets. They also said that the price is cheap and service is accessible at the community

level. The women agreed that it is a nominal cost for cotrimoxazole, which can cure pneumonia, especially compared to the cost of medical treatment. If we took the child to the medical hall, they will write 2–3 types of medicines, which is very expensive and also we get many troubles. One of the women said, "Health post is very far from our village. She gave medicine to my child and my child is cured. Her work is highly predictable for us."

Regarding home treatment, most of them pointed out several methods. These included: keeping the child warm, breastfeeding more frequently, cleaning the child's nose, feeding more frequently than usual, giving warm water, making the fluid from Rudilo then applying on the fontanel and also feeding one to two drops to the child.

Regarding the over burden of the work of the FCHVs, the mothers feel that the FCHVs are doing good work, even though they are not compensated at all. They are satisfied with the pneumonia treatment provided by the FCHVs because it is very easy to get services at any time and their children are cured. They feel that the FCHV's methods for pneumonia treatment/work are effective and will prevent many of avoidable child deaths.

The women's groups made the following series of recommendations: They suggested that FCHVs should get frequent training to unnecessary minimize referrals. Supervision of the FCHVs' work is also essential. Costs of medicine should be paid to FCHVs on time. Sick children should be taken to the FCHVs for treatment. One woman said, "FCHVs should have medicines for all kind of diseases including worms, diarrhea, ARI, etc". To improve the cotrim supply, they suggested managing the supply through the health posts/sub-health posts or in the village or creating a stock of medicine by the FCHVs.

Almost all of the mothers in the users group knew the roles of FCHVs and are using their services. They also have positive feelings towards the sale of cotrimoxazole, are satisfied with the pneumonia treatment from the FCHVs, and agree that they are doing a lot of beneficial work.

## **NON-USER MOTHERS**

Non-user mothers knew that the FCHVs give Vitamin 'A', polio vaccines for the children, distribute Jeewan Jal (ORS), give information on vaccines (5 doses of injections), provide pneumonia treatment (one woman said), give suggestions for referral and information on family planning, and conduct mothers' group meeting time to time. One woman said, "She (a FCHV) is distributing only Vitamin 'A' and Polio vaccine. I don't know anything else."

One of the mothers said, "I don't know the FCHV, but one woman used to come to inform us that they were providing Vitamin 'A' and Polio vaccine for the children." Usually in village, the women are not called by names and titles so she may not be known by the name or title. They know that the FCHVs are providing pneumonia treatment in the village and giving medicines. However, few of them know that the FCHVs are providing treatment for pneumonia. One woman said, " Just now only I knew from you. No one told me this message".

The non-user women take their sick children first to the traditional healers and then to FCHVs, if the problem persists. Some also take their children to the health post directly. One woman said,

"We take our sick child to FCHV for suggestions, then take to the health post if needed." One of the women said she does not have money so she took her child to health post. One of them said, "I do not know what her (the FCHV) responsibilities are and I do not know whether she is overburdened or not.

The mothers were able to list various methods of home treatment; like keeping the child warm; feeding the child larger quantities of nutritious food; breast feeding more frequently; feed; applying cow's ghee and kapoor on chest; not giving oily food; giving child soup of mud stove; apply Rudilo on the chest; giving - "Kamalkothi's (one kind of insect) mud, Kamero (white mud painted on wall of the house) water, soup of Juwano (spice), and soup of leaves of Tulashi (Herb). It indicates that they are still practice traditional methods for treatment and not take their children to FCHVs.

### **Recommendation**

- Encourage the non-user mothers to disseminate the message regarding pneumonia treatment and sale of cotrimoxazole by FCHVs to their peers, relatives, and neighbors.
- Discourage harmful practices and encourage positive practices for home care during the behavior changes activities and field visits.

## Annex-1

The checklists, questionnaires and Focus Group Discussion guidelines designed to explore key issues related to cotrimoxazole sale were introduced and applied as given below:

### SEMI-STRUCTURED INTERVIEW

For FCHVs-

Performance of FCHVs, which includes knowledge and skills regarding pneumonia case management and cotrimoxazole sale; numbers of under five children with pneumonia treated in last month including identification and classification of pneumonia and its treatment/home care.

Effectiveness of program, which includes supply systems, record of revenue collection, profile of FCHVs, feeling of FCHVs, problems related to cotrimoxazole sale and conducting mothers' group meetings.

Technical competencies, which includes constraints in identification and treatment of pneumonia, feelings of mothers towards FCHVs services and follow-up and their opinions as to whether or not the FCHVs are overburdened.

Satisfaction and confidence of FCHVs, which includes obstacles in assessment and treatment of pneumonia and solutions, and sustainability of cotrimoxazole sale.

For VHWs –

Knowledge and skills regarding Pneumonia case management

Satisfaction with FCHVs' function.

Knowledge and skills regarding assessment and treatment of pneumonia

Problems regarding cotrimoxazole sale and pneumonia treatment, including potential solutions

Feelings of mothers towards FCHVs' work, experienced by VHWs

Follow-up visits for FCHVs work

Reporting and recording assistance

For User Mothers –

Availability of FCHVs, which includes first health care seeking place or person preferred by the mothers, access to the FCHVs and familiarity with them, attendance in the mothers' group meetings, feelings of mothers towards treatment of pneumonia done by FCHVs with some cost.

Effectiveness and ability of FCHVs to administer pneumonia treatment, that includes practice of home treatment done by the mothers, whether they know the main home rules, satisfaction with the cost of cotrimoxazole tablets, satisfaction with FCHVs services and whether they know the importance of a full course of treatment.

Satisfaction with the pneumonia treatment did by the FCHVs, which includes plans of mothers to go to FCHVs for medicines and treatment of pneumonia. Feelings/suggestions of mothers on how to improve effectiveness of FCHVs work.

#### **For Non User Mothers –**

Availability of FCHVs, which includes whether they know the FCHVs of the village, first care seeking place or person preferred by the mothers, reasons for not taking a child with pneumonia to FCHVs for treatment, whether they know that the FCHVs are giving pneumonia treatment, feeling of mothers towards idea of treatment of pneumonia by FCHVs with some cost.

Effectiveness and sustainability of the program, which includes feeling of mothers towards the cost of tablet cotrimoxazole (Rs.12 and Rs.18), whether they know the essential home treatments for pneumonia, what are the local practices, attendance of mothers in mother group meetings, etc.

Satisfaction with pneumonia treatment done by the FCHV, which includes feeling of mother regarding treatment, suggestions of mother to improve the effectiveness of FCHVs work, etc.

#### **FOCUS GROUP DISCUSSION**

##### **For VDC Members, Users Mothers and Non Users Mothers:**

Availability of FCHVs, which includes participants perception about FCHVs, whether or not they know the FCHVs of village, works/services that FCHVs are performing in the village, interest of FCHV towards her work, whether they know that the FCHV is giving pneumonia treatment, first care seeking point/place or person for the child with pneumonia and mother group meeting being conducted by the FCHVs. Satisfaction of the participants with the treatment of pneumonia by FCHVs, which includes perception of the participants regarding the cost of cotrim tablets, and the attitude towards home treatment for pneumonia, whether FCHVs are over burdened, satisfaction of treatment provided by FCHVs, etc.

Effectiveness and sustainability of the program, which includes perception of the participants regarding pneumonia treatment giving by the FCHV, suggestions to improve the effectiveness of the program, roles of the participants for cotrim sale and pneumonia treatment, perceptions of the cost of cotrim tablets and suggestions of the participants regarding improvement of cotrim supply system according to the drug scheme program. What are the local terms used to describe the perceptions of the participants. What do participants do when their children have a cough and/or pneumonia, what home care remedies do they use, what are the best feeding practices during pneumonia and what are the barriers to cotrimoxazole sale and effective treatment of pneumonia being provided by the FCHVs?

ATTACHMENT I

**A**

**Report**

**on Participatory Rapid Appraisal  
Nuwakot**

**CS 15**

**PROJECT**

Prepared By  
Dr. Tariq Ihsan  
Asia Area Regional Health Advisor

**Date: September 25, 2000**

## Table of Contents

	<i>Page</i>
<b>Introduction/Objectives</b>	<b>1</b>
<b>1. Methodology</b>	<b>2</b>
<b>1.1. Making Teams for Group Discussions</b>	<b>2</b>
<b>1.2. Training of FGD Teams</b>	<b>2</b>
<b>1.3. Key Information and Sampling</b>	<b>2</b>
<b>1.4. PRA Objectives and Key Issues</b>	<b>3</b>
<b>1.4.1. Section on Maternal and Newborn Care</b>	<b>3-4</b>
<b>1.4.2. Section on ARI/Pneumonia</b>	<b>4</b>
<b>1.4.3. Section on Diarrhea</b>	<b>4-5</b>
<b>1.4.4. Section on Child Spacing</b>	<b>5</b>
<b>1.5. Data Tabulation and Report Writing</b>	<b>5</b>
<b>1.6. Findings:</b>	<b>5</b>
<b>1.6.1. Maternal and Newborn Care</b>	
1.6.1.1.1. Rest During Pregnancy	6-7
<b>1.6.1.1.2. Feeding Practices During Pregnancy</b>	<b>7-9</b>
<b>1.6.1.1.3. Seeking Care for Pregnant Women from Skilled Providers</b>	<b>9-11</b>
<b>1.6.1.1.4. Knowledge for Danger Signs during Pregnancy</b>	<b>11-12</b>
<b>1.6.1.1.5. Actions Family Members Take for Pregnant Woman with Danger Signs</b>	<b>12-13</b>
1.6.1.2. Birth Planning	13-14
<b>1.6.1.3. Child Birth</b>	
1.6.1.3.1. Birth Attendants and Their Practices	14-17
<b>1.6.1.3.2. Participants Knowledge of Danger Signs during Delivery</b>	<b>17-18</b>
<b>1.6.1.3.3. Actions Taken When Danger Signs Appear During Delivery</b>	<b>18-20</b>
<b>1.6.1.3.4. Barriers to Access Emergency Obstetric Care</b>	<b>20</b>
1.6.1.4. Postpartum Care	21-23
<b>1.6.1.5. Knowledge of Participants on Danger Signs during Postpartum Period</b>	<b>23-24</b>
<b>1.6.1.6. Newborn Care</b>	<b>24-26</b>
<b>2. Pneumonia Case Management – Community Beliefs and Practices</b>	
<b>2.1. Most Common Illness among Young Children and Small Babies</b>	<b>26-27</b>
<b>2.2. Beliefs about What Happens in a Child when they suffer from Cough</b>	<b>27-28</b>
<b>2.3. Beliefs about How Pneumonia is Caused</b>	<b>28-29</b>
<b>2.4. Community's Practices for Home Care for Children with Cough/Pneumonia</b>	
2.4.1. Home Remedies	29-30
<b>2.4.2. Feeding Practices</b>	<b>30-33</b>
<b>2.4.4. Barriers to Care Seeking for Children Suffering from Pneumonia and Diarrhea</b>	<b>33-34</b>
<b>3. Control of Diarrheal Diseases (CDD) – Community's Beliefs and Practices</b>	
<b>3.1. Community's Perception of Diarrhea</b>	<b>34</b>
<b>3.2. Perception on When a Child has diarrhea What Happen to him/her</b>	<b>34-35</b>

3.3. Community's Perception on How Diarrhea is Spread	35-36
<b>3.4. Practices of Home Care for a Child with Diarrhea</b>	<b>36</b>
3.4.1. Home Remedies	36-37
<b>3.4.2. Feeding Practices During the Episode of Diarrhea</b>	<b>37-39</b>
<b>4. Community's Perception Regarding Child Spacing</b>	
<b>4.1. How Couples Decide to Opt for Different Family Planning Methods</b>	<b>39-40</b>
<b>4.2. Concerns of Users about Family Planning Methods</b>	<b>40-41</b>
<b>4.3. Where Do Users Get Family Planning Methods of Their Choice</b>	<b>41</b>
<b>4.4. Perception of Non-Users about Family Planning</b>	<b>41-42</b>

# INTRODUCTION

Save the Children US (SC/US) has been implementing Child Survival (CS) 15, a four year program, in Nuwakot district since October 1999 partnering with Nepal Red Cross Society (NRCS), Nuwakot District chapter and District Health Office (DHO) Nuwakot. Nuwakot is a rural hill district situated in northwest of Kathmandu. The district is divided into 13 “Ilakas” containing an average of five Village Development Committees (VDCs). There are 61 VDCs and one municipality. The total population of the district is estimated about 297,000. The total potential beneficiary population is 100,500, of which 44,500 children under the age of five and 56,000 married women between the age of 15 and 49 years.

Although Nuwakot is not very far from Capital City of the nation, most of the VDCs are isolated due to lack of road. Only 45 percent of male and 18 percent of females in Nuwakot over five years age were literate compared to 55 percent of males and 25 percent of female as a whole country. The estimated infant mortality of the district in 1991 is 94 per 1,000 live births, compared to a national average of 93. Under five mortality in the district is similar to the national level. The principal causes of under five deaths in Nepal are pneumonia, diarrhea, malnutrition and birth related conditions. Valid information on causes on under five deaths in Nuwakot is not available. Maternal mortality rate is estimated to be ranged from 539 to 1,500 per 100,000 live births. Early marriage, high infant and child mortality, and the desire for surviving male children contribute to continued high fertility. Very poor access to obstetric services for most women likely contributes to high maternal mortality.

The CS 15 program focus on children under-five and married women between the age of 15 and 49 years throughout the district. In the first phase, the early intervention area covers 32 VDCs and later intervention area will cover the rest of the district. The main goal of the program is sustain reduction in under five and maternal mortality in the district. To achieve this goal focus has been given to (a) increase availability of selected maternal and child survival services (b) Improved quality of selected maternal and child survival services. (c) Increase caretaker knowledge/awareness of selected maternal and child survival issues, and (d) Operation research to improves CS 15 programming in Nuwakot district.

In order to find out the current knowledge, practices, beliefs and behavior related to maternal and child care in the community, quality assessment had been carried out by using Participatory Rapid Appraisal (PRA) tools. The assessment focused on four intervention of the CS 15 project. These include maternal and newborn care, pneumonia case management, diarrhea and family planning. The findings of the assessment will serve as basis for designing Behavior Change Communication (BCC) strategies and messages.

## **THE OBJECTIVES OF THE ASSESSMENT:**

The objectives of the assessment were to:

- Find out the existing helpful and harmful child care practices, and health care seeking beliefs and practices related to four CS interventions in the community;

- Investigate/explore community perception, use and satisfaction with Maternal Child Health Workers (MCHWs), Female Community Health Volunteers (FCHVs) services;
- Explore helpful approaches for BCC activities and message dissemination;
- Identify strategies that certain individuals and families within the community have successfully used to overcome barriers to improve health seeking/health care; and
- Identify enabling environment/factors to BCC.

#### Methodology:

Participatory rapid Appraisal (PRA), a qualitative research method was utilized to learn about community knowledge, practices and beliefs about maternal and newborn care, acute respiratory infections, diarrhea and family planning. These four interventions are the main focus of CS15 and the project staff intends to use the information gathered from this PRA to design IEC messages and activities for the area.

#### **1.1. Making Teams for Group Discussions.**

The HFO health senior management team recruited five staff nurses, six auxiliary midwife nurses (ANMs) and three NRCS male volunteers among the existing CS15 NRCS staff to form five PRA teams. The NRCS project coordinator, monitoring and documentation officer and RH officer acted as team supervisors. This formed a good multi-disciplinary team.

#### **1.2. Training of FGD teams**

The HFO staff including Navin Pyakurel (monitoring and evaluation officer), Bharat Pant (health officer-Nuwakot) and Dr. Tariq (Asia Area Regional Health Advisor) conducted a three-day workshop for PRA team members. The main was to enhance knowledge on the philosophy of PRA, its major principles, requirements for appropriate behavior and attitudes for PRA and introducing PRA tools. Special sessions were held to enhance PRA team member's communication and listening skills and practices to conduct an effective focused group discussion (FGD). Because this was the first PRA experience of the team members, only three tools were introduced including semi-structured interviews (SSI), pair-wise ranking matrix and daily routine diagrams. The workshop also aimed to assess and enhance participant's knowledge on Maternal and Newborn Care, ARI/Pneumonia, Diarrhea and Family planning.

At the end of the workshop, checklists with objectives of PRA and key issues (to explore) were introduced. The teams were also taught how to capture local terms, interesting phrases and quotations of key informants. They were also guided on how to consolidate and prepare daily reports.

The team visited villages in Nuwakot darbar, Inarpati and Sukum Basi to to conduct field-tests. Following which the trainers provided feedback on team's performance and provided further training, especially in the area probing effectively and appropriately.

#### **1.3. Key informants and sampling**

The team chose to carry out PRA in 13 out of 18 new intervention areas (72%) including Bageshwari, Chaughda, Ganesthan, Karanitar, Hallekalika, Narjanmandap, Khanigaun, Gerku, Urleni, Thansingh, Bhadrotar, Panchkanya and Lachang.

Among the key informant the managers of CS15 already identified the participants of non-formal education (NFE), parenting education (PE) and information personal communication (IPC). The PRA team included two groups of mothers in the group discussions in each selected VDC. One group with children less than one year to discuss maternal and newborn care issues and another group with children less than five years to discuss ARI, diarrhea and family planning. In addition, group discussions were also held with VDC members and traditional birth attendants in each VDC. The PRA teams ensured that individual interviews are held most ethnic groups such as Chetris, Brahamans, Tamangs and Newaars. In total 65 group discussions were held with a total of 445 people.

#### **1.4. PRA objectives and key issues:**

A checklist containing objectives of PRA and key issues that needed to be explored around maternal and newborn care, ARI, diarrhea and family planning was introduced.

##### **1.4.1. Section on Maternal and Newborn Care**

The aim is to explore following areas:

- ❖ Knowledge of participants about care during pregnancy. The aim is to explore home care and remedies, local terms for home remedies, feeding practices during pregnancy, who decides what a mother should eat and what she should not eat. This section also explores about how much pregnant women are involved in carrying out house chores and work in field outside and whether there is anyone else in the household who helps in the house chores.
- ❖ Perceptions of participants regarding care seeking from skilled providers for pregnant women. The main aim is to explore if pregnant women sought antenatal care from skilled providers such as MCHWs, if they do, what type of services do they receive. This section also explores other types of skilled providers contacted and reasons for visiting them.
- ❖ Perceptions of participants about what a pregnant woman and her family members should remember. The aim here is to explore if people practice some kind of birth-planning. For example do they know the expected date of delivery and pregnancy outcome (normal delivery or complicated delivery). Do they know the danger signs of pregnancy, place of delivery and the need to contact the trained birth attendant. Do they know that it is important to save money for transportation and treatment at the hospital or any other clinics. Do they think about whom should be available to donate blood if needed.
- ❖ Knowledge of participants about danger signs during pregnancy and local terms they use for danger signs. this section explores not only the knowledge but actions the family members (or birth attendants) take if these signs appear.
- ❖ Perceptions and beliefs of participants on Childbirth such as where do most deliveries take place; who normally assists deliveries; what are perceptions about the quality of skilled providers (including MCHWs) assistance during delivery.
- ❖ Participant's perception of quality of practices of skilled birth attendants (only mothers). This section explores about types of birth attendants (trained or untrained); mother's explanation of how birth attendants assisted them during delivery.

- ❖ This section explores whether some of the mothers attending the group discussion had difficult delivery and what was the difficulty and did the birth attendant help her. Were some mothers referred to a health facility. Why was she referred and who decided to refer her.
- ❖ This section explores about participant's knowledge of danger signs during delivery and actions they take if these danger signs appear. It further explores who makes the decision (at home) to take the ailing mother to a skilled provider outside home and which providers do they usually contact and for which services.
- ❖ Participants knowledge of barriers to access Emergency Obstetric care. This section helps in finding out how family members overcome the barriers to EOC. And how do community members help in the time of emergency.
- ❖ Participants knowledge about the importance of postpartum care. This section looks at issues such as home care remedies for postpartum care; nature of postpartum services provided by skilled providers.
- ❖ Participant's knowledge of danger signs during postpartum period. The aim is to find out about actions family members or birth attendants take. Who decides to get help from outside. What services are provided by the providers they contact.
- ❖ What are the barriers to get PNC. This sections explores to find out reasons, it lack of knowledge of danger signs, is it lack of money for transportation and treatment, is it poor transportation system or is it lack of services.
- ❖ Participants knowledge of local practices for newborn care. What immediate services were provided to newborn by the birth attendant. What services do family members decide that a newborn should get from a health center or skilled provider.
- ❖ Participants knowledge of danger signs in Newborns. Which of these danger signs will prompt family members to seek help from outside. Who is usually contacted. Are skilled providers contacted.

#### **1.4.2. Section on ARI/Pneumonia**

- ❖ *Participant's perception on common illnesses among children and young babies in the area. What are local terms used to describe an illness and it's signs and symptoms, especially for cough and pneumonia.*
- ❖ Participant's knowledge of danger signs in a child with cough. What local terms are used for these danger signs. Which of these danger signs make the family members to decide that the child should be treated for illness outside home.
- ❖ What do participants do when the child with cough had danger signs. What actions do they take at home. What home care remedies do they use. What are the feeding practices during cough/pneumonia? Is breastfeeding continued. Do they take the child for treatment outside their own home. Where do they take them (MOH HP, SHP, private drug sellers, FCHVs,

TBAs, traditional healers) who makes the decision at home to take the child for treatment to such and such providers. Does a girl child receive the same treatment as the boy child?

- ❖ What are barriers to access health care for a child with cough? Is it lack of knowledge; are barriers due to main decision-makers in the family; is it lack of money and transport; is it lack of skilled providers – or dependence upon traditional healers.

#### **1.4.3. Section on Diarrhea.**

- ❖ Perception of participants on what is diarrhea and how it is spread. What are local terms used for diarrhea and its signs and symptoms. How can diarrhea be prevented.
- ❖ What happens to a child when he/she is suffering diarrhea. Write local terms used for signs and symptoms such as diarrhea, dehydration, blood in stool, sunken eyes, dry mouth, thin child, others, etc
- ❖ What do participants do at home when a child has diarrhea. Do they ORS, do they know how to prepare ORS and how to give ORS to a child. What are other aspects of home care. Do they give other fluids such as water, soup, etc (using local terms). What are the feeding practices when a child suffers from diarrhea. Is breastfeeding continued. What are feeding practices. What are the local names of the food they prepare.
- ❖ Participants knowledge of danger signs in a child with diarrhea. Which signs would cause the participants to take the child for treatment outside the home. Who decides where to take the child for treatment.
- ❖ Where do participants take the child with diarrhea for treatment. How do they decide that the child should be taken to such and such provider. What kind of treatment these providers give. Do they pay for the services? If they do how much.

#### **1.4.4. Section on Child spacing.**

- ❖ Participants who are practicing family planning. Which methods are they using. Local terms for methods. How do couples decide to adopt a family planning method. What are reasons. How do they decide to go for VSC or tubal ligation.
- ❖ Participants beliefs of ever using one method and switching to another. What are the reasons. Why do some couples stop practicing a certain family planning method.
- ❖ Where do people get their supplies of FP methods? What is their perception of FP services provided by local health providers (HP, SHPs, PHC centers, Outreach workers, Others). How easy is it for the users to get their supplies? Are there any problems. What are they?
- ❖ Non-users reasons for not practicing family planning. Is it lack of awareness; is it lack of it's availability; fear of side effects; desire for more children; desire for completing family; religious reasons; others

## 1.5. Data tabulation and report writing

The PRA team members collected information in their note pads using the checklists. They drew pair-wise ranking matrix and daily routine diagrams on the ground using chalk or sticks and other local materials such as flowers, leaves, stones, beans, etc (to represent issues, problems, illnesses, persons, etc). Where suitable floor was not available they used news print papers. The diagrams were then copied onto their note pads. A few teams took photographs of PRA tools after the completion of exercise. During these exercise probing was carried out to understand an issue clearly. At the end of each discussion the interviewers compared notes with the note takers and made corrections. After returning from field-work, each PRA team got together to write a daily report based on the “report writing guidelines”. Ratna baba Tandukar (economic opportunity officer), Bishnu Shrestha (secretary) and Bharat Pant translated the Nepali daily reports into English and submitted them to Dr. Tariq, who wrote the final report.

## 1.6. Findings:

### 1.6.1. Maternal and Newborn care:

#### 1.6.1.1. Care for pregnant women – practices in the community

The mothers (with children under five years), NFE & PE participants and VDC gave examples of home care to pregnant women provided by family members. They gave some descriptions of feeding practices, rest during pregnancy and health seeking behavior when complications arise.

##### 1.6.1.1.1. Rest during pregnancy:

- Daily routine of pregnant women:

The analysis of daily routine of 13 pregnant women reveal that most women get up early in the morning (around 5 am) and go to sleep late (around 9pm). 61% pregnant women take two breaks for couple of hours and 34% rest only once during the day. Most pregnant (75%) women carry out house chores such as cooking, serving meals and cleaning utensils. Some also (51%) perform other tasks such as cleaning the cow shed, sweeping the house and smearing the floor with a mixture of clay and cow dung. Most pregnant women also work outside the house. 85% pregnant women fetch water, and of these 64% carry out this task three times a day. Some fetch fodder, firewood and take goats and cows for grazing. Couples of times in a year, women (including pregnant women) participate in *melapat* (taking turns to work on each other’s field without wages) for harvesting or putting fertilizers.

Most pregnant women carryout house chores and field work until they deliver. They do not ask for help from other family members, except from their older daughters when they have one. Some have no options but to work alone as no other family members are available. Occasionally if the husbands were around they would lend a helping hand (reported in some areas). In some areas (Chougada), family members believe that pregnancy is a precious event, so if a pregnant woman falls ill, the mother in law or other family members would help in the house chores and fieldwork. One VDC member in Hallekalika said:

*“Pregnant women do not have enough time to rest, they have to work because they are poor. If men work outside, then they (pregnant women) carry out house chores such as cleaning the house, smearing the floor with cow dung (patero), collect firewood, grass for animals and taking part in melapat – only when she is sick other family members would help her because they care for the baby”.*

While most participants believe that rest is important, brides (including pregnant women) work hard to build a good reputation among their in-laws. Occasionally a few pregnant women face violence or sarcastic remarks if the in-laws find out that they are not working enough. One woman (in Ganesthan) said:

*“ Aapno bainsi bhuke cha, radi parasari rakhche, bhanera lauro linchen, sakkai lauroley naien peatlen nasake takchhen matrei pani”* (another woman (in Ganesthan) narrated a saying of in-laws)” (Our *bainsi* (buffalo - means work here) is hungry and *radi* (widow – here implies to pregnant women/bride) has frequent *parasurnu* (menstruation-also implies to excuses for not working), they (family members) take the stick to either scare her (the woman) or beat her (so that she starts working again).

Another woman (Giri ethnic group in Hallekalika) said:

*“The mother in law would say ‘are you (pregnant woman) carrying a diamond that you are working so slow?’”*

- *The importance of ‘rest’ during pregnancy*

Most participants (mothers, NFE & PE participants and VDC members) consider resting important during pregnancy, but mentioned that heavy household chores and fieldwork do not allow most pregnant women to rest adequately. Most women (during group discussions) recommended ‘light chores’ such as cooking and cleaning utensils at the time when delivery is near. Pregnant women’s participation in *melapat* was also considered a dangerous practice. One VDC member (in Bageshwari-Chogate) said:

*“ A pregnant woman must take rest. They must not go to melapat. The family members should reduce her work and give her rest. She must not do heavy work or lift heavy loads – she can bring water in small pots and should not go to melapat”*

Some FCHVs and TBAs also consider hard work and lifting of heavy weight dangerous for pregnant women as these may lead to premature labor and delivery. One TBA (Khaniguan) said:

*“She (pregnant woman) should not pound rice with dhiki (traditional rice husking leg machine) - Everyone knows that a pregnant women should not play (work) with the nangla (big bamboo plate used for husking rice, lentils etc.) because labor pains may start - she (pregnant woman) is obliged to do this as it is her daily responsibility”.*

While most pregnant women stay in their in-laws to deliver their babies, some go to their parent’s homes to rest and to have a healthy delivery. This is also true for most brides who are pregnant for the first time. A woman (in Bageshwari) said:

*“Two times I delivered in the eighth month of the pregnancy and both times my babies died. When I got pregnant again I decided to go to my parent’s house to rest and eat good food. Now I have two children and both were delivered normally and are alive”*

- Work during pregnancy eases the delivery process

Most VDC members, a few women participants and FCHV and TBAs (in Kahniguan) perceive heavy work, especially starting from the fourth/fifth month of pregnancy results in easy labor and quick delivery. A few mothers also believe that the more a pregnant woman works the more it is likely that she would bear a boy child. A woman (in Chougada) said:

*“Our elders say that alchi (lazy) women gives birth to a girl child and jagarelu (active) women gives birth to a boy child.*

One TBA (in Kahnigaun) said:

*“They (pregnant women) do regular field work and climb up and down the hill. When the due date is near and the face becomes lean and thin, then only she should take rest. Why should she take rest in the early months of pregnancy”.*

#### **1.6.1.1.2. Feeding practices during pregnancy:**

- Types of food pregnant women eat

The results of daily routine diagrams show that most women eat with other family members twice a day and prepare one small snack in the afternoon. A few (30%) take one extra small meal in the morning (mostly maize). Very few pregnant women decide on their own to eat food of their own choice. Most of the time it is the mother-in-laws or friends deciding what the pregnant women should or should not eat. Most pregnant women eat as usual what ever is available twice a day (reported in most areas). Most common food that is consumed are *dhindo* (a paste made up of flour, millet or maize) and *guduruk* (fermented vegetables).

A few women (in Hallekalika) mentioned that eating seasonal vegetables cooked in oil or ghee is very healthy for pregnant women, but only if families can afford. Among food assumed to be good during pregnancy are *gedagudi* (lentils), *bhaat* (rice), *sabzi* or *tarkari* (vegetables), fruits like *kela* (bananas), *mewa* (papaya), *kakro* (cucumber), milk and yogurt. Meat and fish are considered as healthy food during pregnancy among Newaar community. A Newaar mother (in Chaougada) said

*“A pregnant woman should eat what is available otherwise she would become weak. She should eat bhaat (rice), makai (maize), bread, tarkari (vegetables), daal (pulses) and phal (fruits). They should eat mashu (meat) and macha (fish) if available. Mashu and masha give energy and keep the baby healthy. The eye sight of baby improves – they (meat and fish) also improve the weight of baby and make delivery easy”.*

A few TBAs and FCHVs (Khanigaun) considered food rich in ‘vitamins’ important for pregnant women and the fetus. One FCHV said:

*“Those who can afford will eat good food, but those who can't afford, they cannot even eat full stomach. That's why they give birth to weak and wasted malnourished children”.*

Drinking local bear (*jaad*) and wine (*raksi*) during pregnancy is common among Newaar ethnic group and a few Chetri/Brahmans. The local belief is that hot “*jand or raksi*” keeps the abdomen of a pregnant woman clean and improves the health of the mother and the baby.

The mothers in Kharanitar mentioned that a pregnant woman should take iron tablets provided by the health post staff.

- Amount and frequency of eating during pregnancy:

A few participants (Hallekalika) mentioned that women eat more during pregnancy. Most eat as usual (same amount and frequency as before) two or three times a day. Some women (Hallekalika) mentioned that pregnant women eat less due to low appetite.

A few pregnant women belonging to poor class, eat food of good quality only during some religious ceremonies. The TBA in Kahnigaun said:

*“To eat meat and fish the pregnant women have to wait for Dashain, to eat sweet chapatis and rotis (bread) one has to wait for Tihar. To have fruits one has to become sick; other wise we always have Dhido, gundruk (local food) maize and soyabean. A wife cannot express to her husband that she wants to have food like condensed solid milk, coconut and dates - If you have money with you, you can buy what you want - otherwise even if you are tempted to eat, you can not, because you don't have the power to buy”.*

In some cases, pregnant women do not eat what they wish to and depend upon what ever is cooked for the whole family. Usually young pregnant women (and married women) will wait until other family members have eaten. One nine months pregnant mother said.

*“Whether there is rest or not, what ever others order to cook, a pregnant woman must prepare foods like dhendo (paste made from flour of maize, wheat) and rice, which may be good for other family members but not for a pregnant woman. Most pregnant women eat after the other family members have finished. Then they (in-laws) become satisfied”*

- What should not be taken during pregnancy:

Most women (Kharanitar) and VDC members (Hallekalika) mentioned that *kubhindo* (ash gourd), honey and some medicines have ‘hot effect’ and cause abortion. A VDC member in Ganesthan mentioned:

*“ If pregnant women eat kubindo (ash Gourd) during pregnancy it will cause miscarriage. If you give honey during pregnancy it will burn the abdomen and will cause miscarriage”.*

Similarly, sour and spicy foods are considered “hot foods” and are therefore avoided or consumed less (VDC - Chougada). The TBAs and FCHVs (Khanigaun) mentioned that some pregnant women can not resist eating sour and spicy food and sour fruits. One FCHV said:

*“She (pregnant woman) likes to eat lemon and pomelo (sour fruit) - no one knows whether the baby developing inside is asking for it or it is the women herself- these are (sour food) not good for them (pregnant women) as they cause miscarriage”.*

Pregnant women (reported in a few areas) lick soot taken from the bottom of a cooking pot, mud and white soil nor suck on lime and other common stones. The VDC members in Ganesthan considered these habits unhygienic and dangerous for pregnant women. Some also mentioned that smoking during pregnancy is hazardous for the mother and the baby.

#### **1.6.1.1.3. Seeking care for pregnant women from skilled providers:**

- Seeking care from health post staff during pregnancy

Most participants (mothers, NFE, PE and VDC members) informed that pregnant women depend upon home care during pregnancy especially in her first trimester. Only if they have complications they seek health care outside the home from skilled providers such as FCHVs, MCHWs, TBAs and occasionally CMA. A few also contact doctors in the private clinics (Ganesthan) or health staff in Trishuli hospital (Bageshwari) or VHWs (Ganesthan and Bageshwari).

Most women (and NFE & PE participants) did not know about antenatal services provided at the health posts, but mentioned that pregnant many women visit there when they are sick. The decision to take a pregnant woman to a health post is made by mother in laws, husbands, neighbors or friends who experienced receiving good care at the health post.

Only some women (Chougada, Kharanitar and Bageshwari) knew about antenatal care services at the health post and were satisfied with the work of MCHWs. They mentioned that MCHWs provides education on nutrition, home care and rest and carries out examination of pregnant women. One women in Kharanitar said:

*“In our village, a pregnant woman goes to Kharanitar health post, where ‘didi’ (MCHW) examines them to see if they have headaches and abdominal pain, and advise mothers about good nutrition”*

Most VDC members, FCHVs and TBAs (Bageshwari, Hallekalika and Khanigaun) mentioned that pregnant women attend antenatal care clinics at the health posts, where they get TT vaccines and physical examinations and are treated for complications such as abdominal pain, bleeding or swollen hands and legs. One TBA in Kahnigaun mentioned:

*“It is very important for pregnant women to go to the health post because a pregnant woman has to know the position of the fetus or if she has ‘night blindness’ or other complications”.*

- Seeking Care from community workers and traditional healers

Most women (including NFE & PE participants and VDC members) informed that usually if a pregnant woman faces a problem, decision to contact female health volunteers, TBAs and traditional healers is made by mother in law, father in law and husbands. Frequently, the family members would contact *didi baheni* (sisters, neighbors, friends) to get further advice or help.

Some pregnant women contact FCHVs during pregnancy (reported by VDC members in Ganesthan and Chougada) especially for the treatment of cramps and contractions when lying down and lack of sleep. One VDC member in Chougada mentioned:

*“In our village pregnant women contact FCHV, because she is wise and do not charge for the services. A pregnant woman who had bad cramps in her legs, took advice from the FCHV and got cured. The FCHV treated her cramps by wrapping the legs in warm clothes and placing them on pillows”.*

A few also contact TBAs during pregnancy (Bageshwari, Chougada) and appreciated the services they provide such advice on immunization and feeding, physical examination/regular check-up and referral of complicated cases to hospitals. Usually people contact TBAs when they are three or four months of pregnant. The TBA in Chougada mentioned that most family members contact her when a pregnant woman is already in labor or has already developed a problem or complications.

*“I work within my area and sometimes go to VDCs if people need me. I examine pregnant women with the help of ‘bansh ko dhungro’ (cylindrical bamboo instrument/foetuscope) to listen to the heartbeat of the baby. I use my hands to examine position and movements of the baby. I look for danger signs such as bleeding and mal-position of baby and refer mothers to the health post. I examine breasts for lumps and mass and advise for cleanliness of breast and personal hygiene – people know when they should contact a TBA. When I am called, I see most pregnant women already having a problem. A few (family members) ask for help when labor already starts”.*

A few pregnant women (Ganesthan) also seek help from VHWs when they health problems. One pregnant woman (in Ganesthan) said:

*“During my early pregnancy I had one mass (gano gola) of about a handful size that was moving toward left side, I went to the village doctor (VHW) and he advised me to take injections - I took three injection in my arm but the mass moved to leg. Though the village doctor (VHW) had told me to take seven injections - I took only three that is why it moved to my leg. Could you feel the mass” (then some participants palpated the mass and said it is true).*

Most pregnant women (reported by VDC members in Bageshwari) are also taken to religious leaders and *jhankris* for *panchhaune* (a promise to God to sacrifice if things went alright) and *dhup sungaune* (scenty sticks) to make gods happy. Some also consult (Hallekalika) traditional healers if a pregnant woman has health problems such as abdominal pain. The traditional healer gives ‘*mantra ko pani*’ (sacred water).

- *Barriers to seek antenatal care outside home:*

Lack of medical staff, poor staff attitudes, lack of money and lack of transportation facilities were identified as the most common barriers to seek antenatal care outside home. Among other barriers are: lack of knowledge on the importance of antenatal care and lack of awareness on its availability and lack of permission from family members.

Some pregnant women who are aware on the importance of antenatal care services, can not attend because the family members do not allow them (reported by women and VDC members in Ganesthan and Bageshwari). One woman told (in Ganesthan) said:

*“ My mother in law always tells me that she did not have to do anything during gurwawati time (pregnancy) and delivered easily – but now the delivering mothers need many things and doctors – she does not allow me to go for checkup ”.*

A few VDC members (Hallekalika) were not happy with the attitude of staff in the health post and preferred women to seek care from traditional healers. Similarly a few women participants felt that their visit to the health post was a waste of time because they could not TT vaccine or other services for pregnant women. One woman said:

*“ The female staff in the sub health post says unnecessary things instead of examining a mother or giving her vaccine. We feel that our visit was a waste of time – so we go to traditional healer most of the time – we don’t go to the health post anymore ”*

A few FCHVs (Bageshwari) informed that some pregnant mothers who visit the sub health posts are not able to receive any antenatal services due to lack of staff. She informed that it is difficult for MCHWs to travel long distance to come to their place of duty (health post) and work for few hours and travel long distance back home.

In some areas (Hallekalika), most women are aware of health workers in the area but have not as yet received any services. They have heard of TBAs and FCHVs, but do not know what services they provide. Some did not about MCHWs.

Most participants mentioned (Chougada, Narjamandap and Ganesthan) that lack of money and time, and far distance to health post are reasons why pregnant women in their areas could not attend antenatal care sessions.

A few (Narjamandap and Ganesthan) mentioned that pregnant women feel shy to talk about pregnancy or go to the health post for examination. (see annex for ranking matrix.....ganesthan).

#### **1.6.1.1.4. Knowledge of danger signs during pregnancy**

*Among women participants, most identified heavy vaginal bleeding ‘dherai ragad jane’, swollen feet ‘khutas suneney or goda sunnine’, head ache and breech presentation ‘ulto bacha uney’ as danger signs during pregnancy. Some also considered nausea and dizziness ‘ringetta lagney’, high blood pressure, vomiting ‘ulti hune’ and abdominal pain ‘pait dukhne’ as warning signs. A*

*few women mentioned transverse lie ‘bacha charkey basnu’, loss of appetite, headache and miscarriage ‘bacha tuhenu’, stillbirth ‘mare ko bacha janmeku’, fever and low back ache. A few women mentioned cessation of fetal movements as a danger sign. (see ranking matrix).*

*The PE participants in Chougada and Geansethan mentioned that headache, fever, heavy vaginal bleeding and swollen feet and hands are danger signs during pregnancy. A few also mentioned mal-position of fetus, lower abdominal pain, white discharge with blood (ragad mesia ko saito pani jane) and paralysis of one side of the body and convulsions (kamney). The NFE participants (in Bageshwari) identified loss of appetite, nausea, cessation of fetal movements, premature labor, bleeding and tiredness (dhapadi hune) as danger signs during pregnancy.*

Heavy vaginal bleeding, miscarriage, swollen hands and feet and loss of appetite during pregnancy are identified as warning signs during pregnancy, by most VDC members in Bageshwari, Chougada, Ganesthan and Kharanitar. Some mentioned ‘blue and swollen veins in the legs, vomiting, premature labor pains, ‘green bleeding’ (*ragat harrio hunchaarrio-ragat*), cessation of fetal movements. A few mentioned lack of blood (anemia), sleeplessness, cramps in the legs, sour regurgitation (*amilo pani aaunu*) and feeling weak. A few VDC members cited continuous abdominal pain, hand or foot prolapse and jaundice (*pahelo rog*) and cessation of fetal movements (*nachalema*) as danger signs during pregnancy. (See the ranking matrix)

The TBAs and FCHVs in Khanigaun mentioned that bleeding, premature water discharge and pregnant women rapidly losing weight are danger signs. A few TBAs believed that the causes of danger signs are due to eating clay, stone dust, white mud or ash of cigarette ( this is mostly seen in the caste of Brahmin and Chettri).

#### **1.6.1.1.5. Actions family members take for pregnant woman with danger signs**

When the family members notice danger signs in pregnant women they usually contact skilled providers such as medical staff working in health posts or hospitals. Some also contact FCHVs and TBAs. While most pregnant women contact traditional healers for the ‘strong development of their fetus’, a few also seek help for complications. Some pregnant women, especially those who are young feel shy to seek medical help if they develop complications.

- Seeking emergency care from skilled providers:

Most women participants identified heavy bleeding, premature labor, cessation of fetal movements and mal-position of fetus labor as danger signs that prompt family members to seek medical help outside home. A few PE participants (in Chougada) mentioned that green bleeding would cause the family members to seek immediate help.

Usually, the male family members such as father in laws, husbands or brother in laws will take the responsibility of moving the mother to the skilled provider. Those living on the hills, manage a ‘*karpes*’ (stretcher), borrow ‘*rin*’ (money/loan) from villagers and friends and take the pregnant women to the health posts in their areas. Those living close to roads, take pregnant women with complications to Trisuli hospital or to Nuwakot health post. Friends and neighbors, especially *behini didi* (village women) will accompany ‘the ailing mother’ to the hospital or clinic to help.

A few contact TBAs to seek advice for pregnant women with vaginal bleeding, mal-position of fetus or cessation of fetal movements (Chougada). One VDC member in Kharanitar said:

*“When pregnant women have swelling on their hands and legs, vaginal bleeding, continuous abdominal pain, vomiting, hand prolapse, jaundice or cessation of fetal movements, the family members contact staff at Trisuli hospital. Usually the husbands, neighbors and other family members help in making a decision on where to take the patient”.*

- Seeking emergency care from traditional healers:

*In most cases, the family members contact ‘jankris’ (traditional healers), who take money or chickens or goats in return for their services. If the health problems continue, they contact local TBA or FCHV. If the problems persist, the family members decide to seek help from health post staff or go to hospital. Families consult traditional healer even when a pregnant woman has vaginal bleeding or swollen feet or hands. A woman (in Chougada) told:*

*“ jankris took a chicken and gave me ‘phukeko pani’ (sacred water) to cure my swollen feet. They (traditional healers) say that blood is for the gods and meat (chicken) is for people”.*

Some TBAs and FCHVs mentioned that people tie *jantar buti* (some protection object giving by faith healer to tie around the neck) if miscarriage occurs or for a strong development of fetus.

### **1.6.1.2. Birth planning**

*Some women participants mentioned that the preparation for birth usually takes place when the woman is close to the delivery time. This includes identifying a dark and warm place in a corner of the house and preparing the place for delivery by putting straw. The family members also prepare necessary things for the delivery such as blade for cord cutting, thread and soap.*

*Only a few women participants mentioned that family members ‘actively prepare for birth’ such as gaining knowledge on when the delivery is going to take place and making arrangements for foods that are required by a lactating mother. Some VDC members mentioned that a few months before the delivery takes place the family members who can afford, start buying food such as oil, spices, ghee, caraway, methi, juano (caraway), bhatmas (soyabean), suntala (oranges), apple and other fruits, meat and fish to feed the mother during postpartum period. Families who can not afford provide only rice to postpartum mothers. Some family members also save money for obstetric emergency needs. Occasionally, special food is withdrawn if the mother delivers a baby girl. A few family members buy chickens and goat to offer to jhankris and to fulfill their promise to gods. One VDC member (in Ganesthan) said:*

*“Some people buy goat, ghee, oil and chicken to prepare food for the mother- they give this food after the delivery. But when she delivers a girl, they sell the goat – they even give her other food in small quantities”.*

Although among some families, preparing new cloths for the newborn is discouraged in order to avoid expenditure in case a girl child is born. '*chhoro paunu kaile kaile bhoto siunu aaile*' (who knows if the baby boy will come or not – what is the use of preparing clothes for a baby. A few believe that preparing clothes for newborns attract evil eyes and may cause miscarriage or stillbirths. Still, in most families the only preparation for birth includes preparing clothes for the newborn baby”.

Generally, birth planning is not actively carried out. Most women participants believed that it is not important to know about expected date of delivery or about complications, danger signs, place of delivery and contacting skilled birth attendants. Most women informed that they don't save money for transportation or emergency treatment, because, usually preparations are carried out only when a woman goes into labor. Most PE participants had similar opinion. One PE participant in Ganesthan said:

*“Today only this idea (birth planning) came to our minds. People are not aware about birth planning. Most pregnant women and their family members lack knowledge on when to consult TBAs and prepare a place for delivery. Most contact TBAs only when there is a problem. Very few manage to save money before the time of delivery, if needed, they (family members) borrow loans at the time of delivery – such as when a complication occurs”.*

A few TBAs and FCHVs mentioned that while birth planning is carried out in one or the other, generally people do not think or plan for it effectively. One TBA in Khanigaun said:

*“To prepare for safe birth, pregnant woman should get one vaccine and take nutritious food. She should also have regular check-up at the health post (if possible once a month). The family members should collect and save money before delivery and buy sutkeri masala, which includes special spices for delivered mother such as oil, butter, cloves, batisa and nuts. They (family members) should prepare adequate clothes for both mother and baby and provide good air circulating room for the pregnant mother. But although the mother-in-law and neighbors know when the delivery is going to occur, they prepare only at the time of delivery and not beforehand.*

Some women participants and VDC members believed that husbands should be the one to play an active role in birth planning. They mentioned that husbands should think about birth planning, including rest during pregnancy and good nutrition. They should encourage that the pregnant woman should go to health post on time and keep a record of when the delivery should take place. One pregnant woman (in Bageshwari) said

*“How can we alone plan for birth – our husbands neglect us during pregnancy rather trying to understand the needs of a pregnant wife”*

Some VDC members mentioned that thrice a year the community members and VDC members collect money for the poor people through a process called '*asakta*', which can be accessed during the time emergency. A few VDC members recommended how the families can play their roles in birth planning. One VDC member in Kharanitar said:

*“The family members should learn about danger signs (during pregnancy). If for example a pregnant woman has bleeding or abdominal pain or vomiting, they should take her to the health post. The family members should contact an experienced TBA and arrange place for delivery. Husbands should wait on the day when the labor pains start - The family members should manage food and money for transportation and hospital expenditure. They should think about contacting blood bank in Kathmandu for this purpose (emergency obstetric care).*

Most women mentioned that, if a pregnant mother develops complications and needs medical help, the family members, especially women contact neighbors and villagers for help. Regarding blood donation, women mentioned that usually the people are scared because they think it makes their body weak and unable for work in the field.

### **1.6.1.3. Child Birth:**

#### **1.6.1.3.1. Birth attendants and their practices**

- *The birth attendants.*

Most deliveries take place at home and are assisted by MCHWs, mother-in-laws and neighbors (*didi and baheni*) most of the time. Very few are delivered in the health posts or hospitals. Most women and other participants appreciated quality of MCHW’s assistance for a delivering mother. One mother in Hallekalika said:

*“Most of the time, the mother in law, sister in law, neighbors (didi baheni) or any experienced women help women who are delivering a baby. Some like didi (MCHWs) in the health post and they travel long distances to take the woman to her, especially when she has complications”.*

In a few places, where there are no MCHWs (Kharanitar), most of the time help is also sought from a traditional healer for ‘*phuk phak*’ (prayers), especially, if the delivering mother develops complications. Severe cases are taken to health post staff or to hospitals in Kathmandu and Trisuli (reported by VDC members). Most of the time, untrained mothers in laws or neighbors assist a delivering mother. One VDC member said

*“ Sometimes women delivers a baby and the cord is not tied properly after it is cut. Babies die due to bleeding from the cord. This happened two times and both the babies expired. It is all because of untrained grandmothers”.*

Occasionally, family members also contact TBAs in few areas (Bageshwari and Chougada). Some families call FCHVs to assist in delivery, especially when there is some complication or when MCHWs are not available. In Bageshwari, a woman said:

*“We like Bhawani Adakari (name of the TBA) – she provides useful information about feeding during delivery, checks the position of fetus and looks for signs of complications and helps the family to decide where to take the mother if she is bleeding”.*

A few women deliver babies on their own, with occasional help from their husbands, because either they are no other female family members around or they don't have faith on local TBAs. One mother (Rai ethnic group- Hallekalika) said:

*“I delivered the child alone. There was no one with me at home at that time. Later when the child was close to delivery my husband gave me hot water. I cut the cord myself and gave bath the child. So, we should deliver ourselves sometimes”.*

A PE participant (in Ganesthan) said

*“Some garvati mela (pregnant) deliver by themselves. When her labor pain starts, she starts beating the grain (dhan kutne) to speed up the delivery while the husband has gone to fetch water - but nowadays women must not do it (deliver on her own)”.*

Some women, who deliver on their own, usually do not ask male family members to assist them because it is shameful. Instead, they would contact traditional healers, especially if a delivering mother has complications. One woman said:

*“I was in labor pains for four days, but the baby was not coming – I did not ask my husband to help. He contacted jhnari to assist me. Then I delivered – the baby was dead, but I was alright – the jhankri said ‘ I was in pain for four days therefore the baby died’.*

A few FCHVs and TBAs, especially in Khanigaun, mentioned that when a pregnant woman has health problems, the family members should first take her to the traditional healers so that she is relieved from the ‘anger of gods’ or bad effects of devils. If the condition of the woman does not improve, the family members should contact a TBA or some trustworthy old lady, who has light ‘hands’. Only after that she should be taken to the health post doctor/nurse.

In some places, where mostly the deliveries are assisted by neighbors or a female family member, TBAs are not contacted because people have no faith in them. One woman in Hallekalika said:

*“We don't call TBA to help us during delivery. They do not know how to assist. They also do not know how to take out placenta by hands. They kill the babies by giving them oil massage after they are born”.*

Some TBAs (Chougada and Hallekalika) mentioned that many family members seek her help for the delivering mother, but a few do not, because they do not trust her and think she is not competent enough.

- Existing Practices for Child Birth – Participants perceptions:

Some VDC members informed that most women deliver at homes in a clean place with help of untrained relatives or neighbors. While giving an account of the quality of services the untrained relatives or neighbors provide, one VDC member in Chougada said:

*“Some deliveries take place in a cold corner of a house, which is usually meant for storing household items. Women deliver by holding on to the hanging ropes. During*

*delivery mothers are fed soup of 'jyano' or hot water. The person (relatives and neighbors), tries to deliver by giving pressure to different parts of body and if a mother does not deliver she is taken to the hospital".*

Some family members call FCHV or TBAs, because they believe they are trained and use clean delivery methods. Some NFE participants informed that if family members do not have money to buy "clean birthing kits", they buy blades, thread and coin separately. In some areas, use of blades and sickle were common among birth attendants such as relatives and neighbors. (see ranking matrix)

Most participants, especially in the remote and hilly areas in Nuwakot identified the need for skilled providers such as TBAs and FCHVs, because they not only teach good healthy and protective behaviors, but also use clean delivery kits and refer complicated cases in time. A woman in Ganesthan said:

*"We call FCHV who works in our village. When assisting a mother, she massages the back of the pregnant women with warm oil and gives blessed water (pani phukera khana dainchen). She uses sterilized blades and at times sickle (aasia) to cut the cord after the baby is born. Then she disposes the placenta and keeps the coin (over which the cord was cut) and other materials (used in the delivery) under the pillow of the delivered mother for ten days. On the 11<sup>th</sup> day they give the coin covered in a leaf of peepal tree to the guru (the religious person) as "dachhina" on the day of ritual called "nawaran".*

Another woman (in Bageshwari) said:

*"Bhawani Adekari (name of the TBA) is very experienced. When she comes - she prepares for the delivery place and encourages the mother to drink liquid (milk, soup and water). She also advises the mother to rest until she is close to the delivering time. When the delivery is near, the TBA washes her hands and asks the mother to move to the clean delivering place. Then she boils the thread, coin and blade - she uses them for cutting and tying the cord..*

Among those who deliver on their own, lack of trust on the quality of TBA work was evident. A woman in Hallekalika said:

*The birth attendants should also make efforts like a delivering mother. The birth should boil water and keep cord cutting materials ready such as a blade or a knife and khukuris (?). Then they should put the coin under the cord and cut it.*

In case of danger signs, most family members also contact traditional healers to remove the effect of angry gods. The traditional healers give scared water to drink, sometimes with a train ticket (to Kasi in India) soaked in. The traditional healers also tie *buti* to help placenta come out.

Some people use other local remedies to help mother deliver baby and placenta easily. To ease the process of delivery, some family members wash objects made up of copper (*tamako ghau*) and ask the delivering mother to drink the water. Some give water in which the cutting edge of 'khukhuni' (Nepali knife) is soaked in the plate of bamboo (*nangalo*). One woman said:

*“When a woman is taking too long to deliver – we ask her to open ‘the Nepali bag’. Most us also recite “Gita Bachan” (religious book) – a few make mothers drink the water in which the railway ticket (to Tashi in India) has been soaked. Some tie ‘kuto’ (digging tool) around the waist”.*

Most believe that tying a heavy object such as *kuto* (small digging instrument) to the cord, helps in delivering the placenta. A few introduce soft objects in the mouth to stimulate vomiting in order to expel placenta.

- Existing Practices for Child Birth – TBAs perceptions:

The knowledge of clean and safe delivery varied from one TBA to another. Some mentioned that when they assist a delivering mother they give her sugar solution and advise her to pass urine frequently. When the baby is born, some wait for the placenta to deliver for half an hour to one, otherwise they try to pull it out. If the parts of placenta (*chhilaka*) is retained, they refer the case to hospital. Most cut the cord after waiting for 30 minutes. A few mentioned that they there are limited materials in the clean birth kit. For example there are no gloves. One TBA in Chougada said:

*“There are no gloves in the sudkeri saman (birth kit) and it is very dangerous because if I insert my hand I will transfer infection. So I buy plastic from market and use them as gloves. I wrap my hand with plastic and use carefully so that it won't retain inside”.*

Most TBAs try to differentiate between true and false labor. A few provide hot and spicy eggs when a mother is delivering and make them drink the soup of *jwanu* (caraway) or lukewarm water. Some give hot oil massage on the head and hips to help in relaxing the body of a delivering woman. A few perform religious rituals. One TBA in Khanigaun said:

*“ Whatever one does – still when a mother is delivering she should always utter the name of gods. I ask the family members to encourage the delivering mother to inhale the smoke of incense stick – the mother should pray to gods to give her the strength to deliver the baby – she should promise the God that sacrifice will be made if things go right”.*

### **1.6.1.3.2. Participants knowledge of danger signs during delivery**

Most women participants mentioned that *banta hune* (vomiting), *ragat aaune* (bleeding), abdominal pain, loss of appetite and *jorro aaune* (fever) are danger signs during delivery. Some also mentioned hand or foot presentation, inverted uterus (*aang jharoo*), cord (*aandra or naal*) prolapse and prolong labour (*lamo betha*) hand prolapse, pain in abdomen and back and bleeding. A few mentioned that premature delivery and twins are also danger signs.

Usually the decision to take a delivering mother who show signs of complications to hospital is made by the birth attendants, husband, father-in-law and brother-in-laws. A few women cited transverse lie and cord twisted around the neck of the newborn (*bachha janmanu banda paila naal niskane*) as danger signs. One woman in Ganesthan said:

*“ During the birth of my first child, the cord was around his neck three times twisted and could not be released so the child died. The second time my child had cord twisted only one time around his neck – it was removed and the child lived”*

Some VDC members mentioned that hand or foot presentation, prolonged labor (*Tarantar betha lagne*), inverted uterus and retained placenta are danger signs during delivery. A few consider continuous bleeding, difficult labour (*Charko betha*), breech delivery (*ulto bacha*) as warning signs signaling that help should be sought at a hospital or health post.

Some NFE participants consider *dedo* (mal-presentation) and undelivered placenta (*kanrhon*), *bhunrhin dukhne* (pain in abdomen), *chhatapati* (restlessness), *ringata lagne* (nausea) and ‘increase in appetite’ as danger signs during delivery. A few PE participants cited labor more than six to seven days as a danger sign.

A few women believe that ‘some bleeding’ is a normal during delivery and indicates that the mother is healthy. A mother (chougada) said:

*“When a delivery takes place a woman must show some bleeding – women who bleed will not become weak and will not have diseases (in the future)”*.

Some women are superstitious and believe that cord prolapse is common among those women who during pregnancy look at a dead body. One mother (in Ganesthan) said:

*“If pregnant woman sees the laas (dead body) wrapped in a cloth then the child will have cord around his neck at the time of delivery – I saw such a dead body and my baby had cord around his neck”*.

### **1.6.1.3.3. Actions taken when danger signs appear during delivery:**

- Seeking emergency obstetric care from skilled providers:

When danger signs such as bleeding, transverse lie, hand prolapse or prolonged labor are noted, most family members (husbands, mother in laws, father in laws) consult with FCHVs or TBAs first or take the mother to the nearest health post or Bagtar Hospital in Trishuli or to Thapathali hospital in Kathmandu. One woman in Hallekalika said:

*“if a mother does not deliver for more than two days, she should be taken to Thapathali hospital in Kathmandu. The doctors there can rotate the child in the body of woman and can deliver the baby by saline drip”*.

The VDC members in some areas mentioned that when a delivering mother has complications such as retained placenta and vaginal bleeding, the family members contact MCHWs. One VDC member in Hallekalika said:

*“Once there was a case of retained placenta. The family members took her to the MCHW. She administered a bottle of saline for twenty minutes. Before she took urine out using a catheter then she repeated giving saline mixed with yellow medicine. The placenta was delivered and the woman was saved”.*

Most VDC members emphasized the importance of contacting skilled providers when danger signs are noted and must not wait. They must also seek help from other community members. One female VDC member in Ganesthan said:

*“Once Suntali had prolonge labor. After childbirth she had heavy bleeding. They call health worker from nearest health post, but the women had already died when health worker came. Villagers say, if they were informed on time, they could have taken the woman to hospital in Kathmandu. Later, another mother had similar problem like Suntali. The family members contacted health post staff and neighbors in time - so they took her to the hospital immediately and she was saved”.*

Some PE participants had similar opinions. They told that those who do not use TBAs or experienced birth attendants in time face lot of problems. Usually it is too late to save the life of the mother even if she is taken to good hospitals. One PE participant in Ganesthan said:

*“They (neighbors) told that a mother died due to “hand prolapse” and was sent to the hospital, where surgery was performed but both the child and the baby died – I think she was taken to hospital too late”.*

- Home remedies for emergency obstetric care

Sometimes family members use some local remedies to stop the bleeding. In Bageshwari, the experienced women give the leaves of *lahare batule* ( a local herb) to the bleeding mother and a TBA uses the tea made up of *juano* (caraway) to stop bleeding. There are several remedies to expel retained placenta. Tying something heavy to the cord is considered to deliver placenta in few hours to couple of days. One woman in Bageshwari said:

*“I heard that there was one case where the placenta did not come out after the delivery so they tied cooto (tool used for digging earth) with the cord and after three days the placenta came out”.*

One most common practice (reported in most areas) is putting hair (of the mother) in the mouth of the delivering mother in order to stimulate nausea and vomiting. This helps in expelling placenta quickly. Some people use the roots of *dattium* (roots used to clean the teeth) by tying it around the abdomen.

- Faith on sacred things and superstitions:

Most women have faith on things, which are sacred and spiritual and helpful in expelling placenta. One common practice is using a railway ticket used by people going to Kashi (a religious place in India). Many family members and jhankris use it in several ways. Some soak the ticket and give the water to the mother to drink, some tie the ticket to the belly of the delivering mother and some keep it on her head. One PE participant (in Ganesthan) said:

*“ When the placenta does not come out the father in law shakes the banana tree and the placenta comes out”.*

The mothers (in Ganesthan) informed that during the labor, many women do not tie their hair – they let it loose as this speeds up the delivering process. One mother said:

*“Women who are delivering the baby do not tie their hair. They (family members) believe that tying hair is like tying the abdomen, which makes the delivery a difficult process. Keeping the hair loose is like letting the body open - which makes the delivery easier.*

In an occasion where the delivery takes long, a few family members ‘cut’ the rope of a buffalo tied in the shed to speed up the delivery process. Some seek help from experienced mother in laws. A woman in Chougada said:

*“If an experienced mother-in-law takes ‘kharani’ (ash) and makes ‘dharso’ sign on a plate. If the lines turn out to be long – they (family members) assume that the delivery will prolong – they (family members) do this as soon as the labor starts”*

Some female VDC members mentioned that for inverted uterus a local remedy *thulo okhati*, *pakhanbhed* (?) should be used.

- Husband’s support during labor and delivery

Some VDC members suggested that husbands should provide support his wife when she is delivering. One female VDC member said:

*“Husbands should also help his wife during delivery – he should lift her or hold her when required. Husband is the one who loves wife very much and women want to be in the arms of husband when in pain. Even she wants to die in his arms. But some husbands run far away to escape the cry of his wife during labor. Others start crying just like his wife at the time of labor”.*

#### **1.6.1.3.4. Barriers to access Emergency Obstetric care.**

Most participants (women, NFE, PE participants and VDC members) mentioned lack of money and poor knowledge on danger signs as main reasons why most women who have obstetric complications fail to reach a health facility and skilled provider in time and die in the way. Some participants also mentioned long distances and lack of transportation as barriers to access emergency obstetric care. A few participants added other barriers, including, lack of permission from family members, traditional constraints, lack of involving women in decision making, too much dependence upon traditional healers and herbal medicines and lack of attending antenatal clinics and taking advice before the delivery takes place. A few also mentioned that women who deliver on their own, have no one to take her to EOC services if complications arise. One woman in Hallikalika mentioned:

*“Most people here are poor - we don’t have money. So when a woman (in labor) is having a difficulty, she can not get help. Sometimes neighbors lend some money and sometimes they don’t give because they think we are poor. So instead of taking her (woman) to the hospital, we bring a jhankri and ask him to give her the phukeko pani (sacred water). Most poor people do this and stay (continue the practice) drinking this water”.*

Most participants (including a few FCHVs and TBAs) informed that when a mother has obstetric complications, the husband, mother in law or father in law decide to seek help outside and the male family members and neighbors help to transport her. Most of the time transportation is carried out with the help of *karpes* (stretcher).

#### **1.6.1.4. Postpartum Care**

##### *Postpartum care from skilled providers:*

Regular postpartum care is not sought due to lack of awareness on its importance. A common statement made by participants in most area was: *“When the delivery has occurred normally, why should one contact health staff”*. Postpartum contacts with skilled providers are made only when a woman or her newborn has complications after the delivery. One VDC member in Hallekalika said:

*“It is important to visit a health post if a woman (delivered) has problems such as vaginal injury and abdominal pain. In such cases people contact MCHW, who carries out physical checkup, give medicines and clean the wound. Usually the health post staff do not come to attend a mother after delivery, except when there is a problem.*

Some TBAs and FCHVs were of the same opinion. They mentioned that there is no need for a checkup after the baby and the placenta (*kaunda*) have been delivered safely. If the mother has fever or her hands and body are swollen or she has breast engorgement (*dhunelo*) or she has bleeding and does not stop for a long time only then she should be taken to the health post for checkup.

##### *Barriers to Postpartum care from skilled providers*

In most areas, lack of knowledge on the importance of postpartum care is a major reason for many women not getting postpartum services. Many mothers and pregnant women (in group discussions) were not aware on the importance of skilled workers providing care and the kind of services they are supposed to receive during the postpartum period. A mother said (in Ganesthan) said:

*“ Today only we heard about the importance of care after delivery-what do they check – is it really important?”*.

Some traditional beliefs are one of the barriers to access postpartum care. Some women (in Bageshwari) informed that the mother should not be touched for few days after the delivery and the newborn should not see the sun.

A few NFE participants (in Bageshwari) mentioned that due to mother's involvement in the fieldwork, they usually do not have time to go to the clinic and learn about postpartum care. A few women mentioned that lack of time (especially during harvest) and far distance to clinics are other reasons (see annex ranking matrixes) that most women can not access services including postpartum care.

#### Rest and home-care during postpartum period

Most participants perceive that rest is important for a delivered mother, especially in the first seven to eleven days. During the 'resting' period, family members, neighbors and sometimes TBAs take care of the mother and the newborn. One woman in Hallekalika said:

*“A mother who has delivered a baby must take rest otherwise evil spirits will get to her and her health will be affected. If mother in law or sister in laws are present, they take care of mother (delivered) and if not, husband take care of her. If they (family members) are not there she (postnatal mother) takes care of herself. Rich hire someone from outside to take care of the mother and newborn”.*

Good personal hygiene during rest is perceived to be important by some women and VDC members – they believed that this keeps away illnesses from mother and the baby. A few believed that delivered mothers should be kept in dry and warm place in the house as this keeps away the diseases.

In most areas, oil massage and bathing rituals (for delivered mothers and newborns) are carried out to 'clean' the bodies of the mother and the newborn. A few give hot compression to 'loosen the muscles' and relieve cramps caused by contractions.

#### Special diet during postpartum time

Most families prepare 'special diet' for the delivered mother in order to help her regain her strength and produce enough breastmilk. The basic ingredient in this special diet is 'ghee' (fat), therefore most families would start buying it before the delivery takes place, even if they have to take loans. One female VDC member (in Hallekalika) said:

*“When a woman delivers, we give bath to the newborn and provides good nourishing food such as fish. The delivered mother is provided 'bethu' leaf and 'bethu' seeds, chamsur, skin of pakhanbhed, skin of thulo okhati, harjuro, battisa (all are medicinal plants) and they are cooked with milk and given to the mother as a special food for few days”..*

Diet with herbs are usually used to prevent postpartum bleeding, promote production of breastmilk and to improve a mother's health. For example, most families use 'thulo okathi' (roots of a local herb) in the diet to stop postpartum bleeding. One woman in Bageshwari said:

*“We use 'pakhan bedh' (root of a local herb), hot water and other liquids such as jwano (caraway) keeps the mother healthy, stop bleeding and helps in breast milk production”.*

Some women, a few VDC and TBAs members informed that a delivered woman should be provided a mixture of *kanthajar* (a wild plant), *tarro dhulo* (?) and *pakhanved* (herb) with *ghund*,(?) *battisa* (?) and *caraway*, soon after the delivery, as this not only improves the health of the woman, but prevents postpartum bleeding.

In most areas, delivered mothers are provided with local wine called '*rasksi*' as it is perceived to have 'hot effect', which helps in breastmilk production. One woman in Ganesthan said:

*“ Most delivered mothers should get good food such as daal, rice, ghee, fruits and fish. We also give them hot alcohol (rakshi) with ghee in it because it is good for health and the mother can produce more milk”.*

#### Feeding practices during postpartum period:

Among other regular diet, most of the time a delivered mother is given '*ghee*' or butter, soft rice and *jwano* (caraway). If family members have cows, they provide milk with '*til*' (sesame seeds) in it. A few provide *jauojhol* (?), *daal* (lentils), pulses, fruits, meat and fish. Greens such as radish or cucumber leaves are commonly used. Animal protein is considered to be a good food and source of 'energy' for delivered mothers. Most of the time it is rarely provided because it is not affordable and considered a rich man's diet.

Among some families, certain foods are restricted during the postpartum period. For example, meat is not given, if a delivered mother has fever and stomach disorders. Green vegetables are restricted because it is believed to cause green stool (*gai*) and diarrhea in a newborn. Among other foods, *karkalo* (?), maize, beaten rice and lot of water is prohibited. Any hot and sour food is not provided as it is believed that this makes the baby sick.

Among a few families, food is restricted if a mother delivers a baby. A woman in Bageshwari said:

*“Only rich people give meat as well to a delivered mother because they can afford it. If a daughter is born they will not be given meat to a mother for five or seven days, because the mother in law is angry”.*

Another woman in Ganesthan said:

*“When I give birth to a male baby, then mother in law and husband love me but when the child is a girl they (in-laws) even don't give rice to eat”.*

#### **1.6.1.5. Knowledge of participants on danger signs during postpartum period:**

Most participants cited heavy vaginal bleeding and abdominal pain as danger signs in women during postpartum period. Some also mentioned inverted uterus (*aang niskane*) and uterus prolapse. A few added other danger signs, including, nausea, vomiting, headache, loss of appetite, fever, dry mouth, puss discharge from vagina and breast engorgement(*dudh dhunilo bhayema*). In some areas, a few women believed that uterus becomes like a mass because the air goes into it and that this only requires surgery. A few believed that some experienced women

could forecast whether a mother would face pain after delivery or not. One woman in Ganesthan said:

*“ If there is abdominal pain after delivery, usually, the pain is called rangiba. The duration of this pain is related to the number of children born. If a mother has five children it happens for five days”.*

A few participants mentioned that birth of an abnormal baby is a danger sign for a postpartum mother. One VDC member in Chougada said:

*“We were surprised to see a baby without nails and hair and with skin that looks like it is burnt – maybe such babies may make their mothers sick afterwards (postpartum period)”*

Most mothers informed that if a mother faces complications during postpartum period, she is usually taken to the health post or to hospitals. Usually the husbands, father in law and mother in law suggest where to take the mother. Sometimes they call skilled providers to attend the mother at home. A few women mentioned that these health providers give saline IV drips and medicines.

Usually, the mother-in-law, father-in-law and/or husband will call a TBA to attend the mother if she has fever, abdominal pain and abdominal mass or they would use some home remedies. One woman in Narjamandap mentioned:

*“After delivery the blood clots inside uterus and remains in the abdomen as a mass, therefore we tie the abdomen with a cloth so that the clots are expelled”.*

Another mother in Chougada said:

*“ When the cord is cut before the placenta delivers, then the placenta goes to the heart and the woman dies. If ‘cuto’ is tied to the cord then the placenta does not go up”*

In case of ‘heavy bleeding’, most of the time family members take the mother to the nearby health post or the hospital in Trishuli. Lack of money or transport are some barriers to access care in the hospitals and health posts. In a few cases, the family members will call an experienced women (not trained) to remove pieces of retained placenta manually.

#### **1.6.1.6. Newborn care.**

##### Immediate newborn care:

Washing the newborn baby with lukewarm water, giving an oil massage and keeping the child warm are common home-care practices carried out by most families, soon after the child is born. Some participants also mentioned breastfeeding, cord care and eye care are carried out immediately after the delivery. Among Rai and Giri communities, a few may delay bathing rituals for four to eleven days. A Rai woman in Hallekalika said:

*“After the child is born, they (community) clean it with warm water and give an oil massage. They also keep the child warm in clothes. Many people believe that a delivered*

*mother and newborn baby are not pure (chokho) therefore they have to make them 'pure' by giving them a bath after four or eleven days (after delivery)".*

While most women informed that colostrum is discarded, some initiate breastfeeding within the first day the child is born. Occasionally, if a mother has not produced the 'real' breastmilk, they ask another lactating mother to breastfeed the child for a few times on the first day. Some women informed that breastfeeding is delayed for a day or two. One VDC member in Chougada said:

*"When a baby is born it is given a bath with warm water and handed over to another mother to feed her breastmilk. They (community) believe that colostrum is bad for the babies and should be thrown away for at least a day. Sometimes they give cow's milk to the newborn in a bottle".*

In most areas, the newborn is kept warm (*sekne*) by giving warm oil massage, washing with warm water and then wrapping the child in warm clothes. Many family members keep the baby close to the fireplace. Giving warm water bath is carried out usually by the person who assisted in the delivery and occasionally these are either TBAs or FCHVs. A woman in Ganesthan said:

*"We ask the person who delivered the mother to clean the baby with warm water. In my case, a sudeni (TBA) massaged my baby with warm oil and gave it a bath. Then she advised us to keep the baby warm".*

Some participants mentioned that after the child is born it is important to keep the nose and mouth of the baby clean of mucous. Some use oil on the stump of the umbilical cord, while among Giri and Rai ethnic group, ash is commonly applied, as it is believed that the cord will get dry and fall off soon. A few do not put anything on the cord.

Some TBAs and FCHVs do provide newborn care soon after the child is born and for a couple of more days after the delivery. Most TBAs and FCHVs advise mothers to breastfeed their babies immediately after delivery as soon as the baby is cleaned. They inform them about the importance of colostrum. One TBA in Kahnigaun told:

*"After a child is born, I check the nose, mouth and eyes to see if they are blocked with the 'green dirt' and clean them. I then wash the baby with lukewarm water and wrap the stump of the cord with a piece of cloth to prevent air from entering the body. I also give oil massage to the newborn - The newborn should be given a massage with warm oil and should be wrapped in warm clothes to protect from cold - I also see whether the baby has passed urine and stool and whether the baby sucks breast milk properly. I go back after 2-3 days to see both mother and the baby. I explain to the mother that vaccine (BCG) should be given to the baby and she must look for the signs of 'garve roga' (cold transferred from the womb to the baby). Sometimes, I go and check the mother and baby again after 5-7 days".*

Usually the family members do not decide to take the child to doctors for at least eleven days for the fear of exposing the child to sun. Some women (in Chougada) informed that the newborn is taken to the health post or a hospital after 11 days (*nwaran*) for immunization.

### Knowledge of danger signs in Newborns

Difficult breathing, fever, infected umbilical cord and inability of suck breastmilk are danger signs commonly mentioned by most participants. Some added that jaundice and infected wound (*ghau khatera*) are some other danger signs. Some participants mentioned other signs including skin rash (*bibira*), bleeding from cord, dry lips and mouth, grunting, '*shya shya*' (wheezing), hypothermia, diarrhea and cough. A few informed that if a mother delivers twins, then one of the babies will be born with low birth weight (*khyute or khinaure bachha*). A few also considered cyanosis (blue baby) and birth defects (two headed baby, non-perforated anus).

A few mothers mentioned that occasionally a newborn develop diseases that one can not recognize. These diseases are only treated by jankaris. An eighteen year old mother (in Ganesthan) told the story of the death of her newborn:

*“ I gave birth to a son and after eight or nine days a wound appeared on his finger tips. This wound started to affect his body as well. After twelve or thirteen days his nails started bleeding and he became thin and could not suck breast milk. We took him a jhakri who said 'this disease is from the God. I will try to cure it, but what is written in the fate of your son will happen'. Worried, I took him three times to Nuwakot hospital (health post) but could find the doctor. On the third visit, I met him and after checking he told me that the child's eyes are becoming yellow and he will not get better here. We did not have money - so I went to a medical shop to buy medicines but the shopkeeper told me that this disease will not get better here take him to Kathmandu. We decided to take the child to Kathmandu but we did not have money. I requested a neighbor to lend me hundred rupees, but nobody gave me. I even told her that I will return more than what she will lend but the neighbor refused. After seventeen or eighteen days blood started coming from the child's mouth – I saw all this and cried – I was helpless – I could not take my child to the hospital. After 34 days my child died. 'Hune kuro bhaihalchha, tarera tardaina' (what fate has for people – nobody can control).*

Most participants were not aware of reasons why some newborns develop complications, except for a few, who provided some information on low birth weight babies, cyanosis, fever and respiratory difficulty.

It is believed that having twin is risky, as one of the babies will always be born with low weight. Among other reasons for low birth weight babies, are superstitions. One NFE participant in Bageshwari said:

*“A newborn will have 'sukuwa rog' (thin baby) if another pregnant women touches the newborn. This can only be treated by dhamis who blows and performs 'jharphuk' (religious rituals) and gives a 'buti' to the mother to keep away the evil eyes”*

Some believe that abdominal massage during the early months of pregnancy is the cause of still births or babies born blue (cyanosed). One VDC member (in Hallekalika) said:

*“ A mother delivered a baby at the eight month of the pregnancy after getting an abdominal massage. The baby was born next day and was blue- the baby was motionless so after fanning with a 'nanglo (big bamboo plate) the child cried.*

A woman in Naranjmandap said:

*“When my baby was delivered - at that time he was blue. I got scared and I started hitting him slowly with the fold of my sari – then he started breathing normally. I learnt this from my mother.”*

#### Seeking care for the newborns with complications:

If the newborn baby develops complications, most of the time the family members seek cure outside home. Usually they contact traditional healers and sometimes they contact FCHVs, TBAs and health post staff. A few carry out home remedies if the newborn baby develops respiratory complications.

One VDC member in Hallkalika said:

*“ When a baby is unable to suck the breastmilk – we say it is a dangerous sign so we take the child to a traditional healer for ‘phuk phak’ (prayers). Some people call a jhankri if the child has dry lips and mouth. We also seek help from sub health post staff if the baby has fever, fast breathing and infected cord’.*

Another VDC member in Ganesthan said:

*“When a baby develops jaundice or infected wounds or bleeding from cord most people contact VHW in their area. If the VHW can not help we then contact health post staff or go to the hospital in Trishuli”.*

A mother in Hallekalika said:

*“On the first day my child was born, he developed difficult breathing. His chest made ‘shya shya” sounds (wheezing). One of my didi baheni (friend in neighbor) told me to put ‘dudilo’ on my nipples – I did that and when my baby suck the breastmilk he became alright”*

(Dhudilo is a herb which is also used if the newborn develops pneumonia.)

### **Pneumonia case management – community beliefs and practices**

#### **2.1. Most common illnesses among young children and small babies**

Most participants identified common cold, pneumonia, fever, diarrhea and skin infections as common childhood illnesses. Among skin infections, scabies and ring worms are common. Some participants added that headache, dysentery, intestinal worms, malnutrition and vomiting are also common childhood health problems. A few also included “breathing difficulties” like asthma and chest indrawing, jaundice, leg-paralysis, epilepsy/fainting spells, leprosy, measles/skin rashes, TB, typhoid and abdominal pain. (See the ranking matrix in annex)

<b>Local terms for Common Childhood illnesses</b>		<b>Local terms for signs and symptoms of pneumonia</b>	
Pneumonia	<i>nepali, vharvarin, dhok, nepali</i>	Fever	<i>Joro, tatto badhi</i>
	<i>devta, chhauda</i>	Difficult breathing	<i>haklak haklak, sas rokinchha</i>
	<i>lagne, boksi lagnu, kuphat lagnu, nepali</i>	Staring looks	<i>aankha ma tal, aankha lolaunu</i>
	<i>devta</i>	Drowsiness	<i>aankha chimma,</i>
Chest indrawing	<i>chhati haune</i>	<i>aankhan herdaina</i>	
Gasping	<i>lamua sanse</i>	Rolling eyes	<i>aankha tal marnu</i>
Common cold	<i>rugakhoki</i>	Chest indrawing	<i>kokha haune, chatti</i>
Throat infection	<i>ghanti thulo hune</i>	<i>karaune, hayak</i>	
Diarrhea	<i>Jhadapakhala,</i>		<i>Hayak</i>
	<i>dishalagne, pet</i>	Stridor	<i>ghati karaune, ghanti</i>
	<i>lagne, irjava</i>	<i>khyar khyar</i>	
Bloody diarrhea	<i>ragat masi</i>		<i>Haune</i>
Intestinal worms	<i>Juka</i>	Wheezing	<i>Chhati ghayar ghayar</i>
Fever	<i>joro</i>	Chest pain	<i>chhati dukhne</i>
Vomiting	<i>banta hune, eva</i>	Fontenale moving	<i>talubluck bluck haune</i>
Malnutrition	<i>sukuwa rog, khanki,</i>	Fast breathing	<i>dheri sas pherchha,</i>
	<i>kuponsan</i>	<i>suan suan,</i>	
Epilepsy	<i>chopne</i>	Chest indrawing	<i>chhati bhitibiti, cchati</i>
Fainting spell	<i>murchha parne</i>	<i>haune</i>	
Skin infection	<i>ghau khatira</i>	Irritable	<i>jhishinchha</i>
Tuberculosis	<i>Chherchhan</i>	Nasal flaring	<i>nak phur phur garne</i>
Leprosy	<i>Kustharog</i>	Staring looks	<i>aankhan lolaunu,</i>
		<i>aankhan taal marnu</i>	
		Watery eyes	<i>aankhan ko seto bagh</i>
		<i>rasilo hune</i>	
		Cyanosis	<i>sokyo, aankhan</i>
		<i>nilo hauncha</i>	
		Unconscious	<i>alas talas</i>
		Nausea	<i>wak wak</i>
		Loose weight	<i>sukra jauncha</i>

## 2.2. Beliefs about what happens in a child when they suffer from cough

Most participants informed that when a child has pneumonia he/she develops chest in-drawing, fast breathing, fever, difficult breathing and nasal flaring. Occasionally, the child may look drowsy, stops breast-feeding and may develop wheezing in the chest. A mother in Hallekalika said:

*“When children suffer from pneumonia, they have a ghyar ghya sound when breathing and they can not suck breast milk because their nose is blocked. And sometimes the pneumonia is so bad that the child may become unconscious (alas talas). When my son had pneumonia he became so sleepy (ankha herdaina) and he had ‘kokha hanchha’ (Chest Indrawing) and breathed slowly. He had difficult breathing (sas rokinchha) and had fever (tato badhi)”.*

Some participants mentioned that the child might also develop ‘staring looks’ or have watery eyes, red mouth and sweating. One NFE participant in Bageswari said:

*“When children suffer from pneumonia, they develop fever (joro) and difficult breathing (haklak haklak). Due to high fever and bad chest (chhati), they develop ‘staring looks’ (aankha ma tal) and sometimes drowsiness (aankha chimma) which shows that the child is very sick”.*

A few participants also added, that children with pneumonia have bad chest (congested), continuous cough, vomiting and fainting-spells. Some children with pneumonia develop chest pain, red eyes and are irritable and unable to suck breast milk. A few children develop hypothermia, cyanosis, gasping, lethargy and among infants, the fontenelle moves fast with breathing.. Some children loose appetite, refuse to eat and loose weight. One VDC member told:

*“The child who has pneumonia (nepali), develops chest indrawing (kokha haunne) and has wheezing (ghyar ghyar rog). In babies, the fontenale moves fast with breathing (tal bluck bluck hune) and if medicine is not given the child becomes very sick. The child becomes drowsy and stares (aankha lolaunu) with wide eyes. Some times the cough is continuous and the eyes become very red and the child faints”.*

Another VDC member (in Ganesthan) said:

*“Pneumonia is also called ‘nepali devata’, ‘chhauda lagnu’, ‘boksi lagnu’, ‘kuphat lagnu’. When children have pneumonia, they develop dry eyes (parela batinu). Some also develop blueness on nose and mouth (sokyo). Some have bad smell coming out of his mouth. If they are very sick, they develop chest indrawing (chhati bhitibhiti).children with chest indrawing can die if they are not taken for treatment or ‘jharphuk’.*

Beliefs about how pneumonia is caused.

Most participants believed that pneumonia develops when common cold becomes worse or when children wear are exposed to cold weather. They mentioned that most children develop common cold when they play in cold weather and wear thin clothes or when small babies are given baths in the cold weather or their chest are not properly covered with blankets. A few mentioned that most of the time when a mother has to do field work, they leave their babies at home and some small babies are left in cold and damp room. They believed that such babies develop common cold and pneumonia. A woman in Kanigaun said:

*"Gharma dherai kam hunchha, bachalai chodera kam ma janu parchha, tyo belama bachcha mut ma dubchha ni (There are lot of chores in the house and we leave the child at home before working outside. At that time the child soaks in his urine (and this makes him cold)"*

Some believed that pneumonia is caused when children eat hot, sour and spicy food or cold food like cucumber and yogurt. One VDC member said:

*"If children eat cucumber their nose will start discharging liquid (ryaal) like saliva and the child will develop common cold (ruga khoki) – which then becomes pneumonia".*

Some believed that if a lactating mother takes food that is not good for a baby, then the baby may develop common cold and pneumonia. A few participants mentioned that if a lactating mother touches another woman who is menstruating, her child develops pneumonia and may die. A woman in Hallekalika mentioned:

*A child develops 'dhok' (pneumonia), if it eats sour, spicy and oily foods. If a mother who is giving breast milk, eats spicy 'piro' during her illness (when she has fever) her baby will develop dhok".*

A few mentioned that a child develops pneumonia because the parents have not fulfilled their promise to Gods (*nepali deuta*). Few others mentioned that pneumonia is also caused if the child is kept dirty (soiled) and if the child sucks in air during breastfeeding.

## **2.4. Community's practices for home care for children with cough/pneumonia**

### **2.4.1. Home remedies**

While the use of methol (locally called vicks) is vastly practiced (rubbed on the chest and the forehead of sick children), home remedies using local herbs and minerals are also commonly practiced in all parts of Nuwakot. Most commonly used herb is '*rudilo*'. '*Juano* (caraway), *jira* (cumin-seed), *besar* (turmeric) and *hing* (wild spices) are also commonly used.

*Rudilo* is used in a variety of ways. Most of the time it is given as tea and occasionally, it is mixed with other herbs or minerals. Most PE and NFE participants explained that a boiled mixture of *rudilo* and *rato mato* (red mud) is fed to a child who has cough and pneumonia. Sometimes, *rudilo* is mixed with '*harro*' (considered to act as expectorant) and boiled. Occasionally it is mixed with *jeera*, *juano* (caraway), tea leaves and turmeric powder and cooked properly. Sometimes other herbs are mixed together with *rudilo*. A woman in Khanigaun said:

*"I mix rudilo leaves with jeera (cumin-seed) ,juano (caraway) besar and nun and ginger and boil this mixture in water and feed to my children who have cough or nepali deuta (pneumonia)".*

Sometimes, *rudilo* is used topically. Most women in Ganesthan mentioned that they crush the leaves of *rudilo* and extract the water. This water is massaged on the chest and forehead of a

child who has common cold or pneumonia. This has ‘hot’ effect on children and cures bad chest. One PE participant (in Ganesthan) explained:

*“ A lot of people use rudilo. We put rudilo pani (water) on the head (fontanel) of the child with common cold. We also put on face and chest – this cures common cold – it has hot effect”.*

Other herbs such as leaves of *tulsi*, *tittipati* (to cure fever), ginger and garlic are also commonly used. A few PE participants mentioned that ginger soup mixed with honey has ‘hot’ effect and cures bad cough. A few NFE participants mentioned that one spoon of garlic and ginger three times a day is good for children suffering from cough or pneumonia. When a lactating baby has pneumonia, *tulsi* extract is given to both the mother and the child. It is believed that the effect of *tulsi* will transfer to baby through breast milk. A woman in Chougada said:

*“When my child becomes sick (pneumonia), I take one spoon of pure honey and put three drops of extract of tulsi leaves and give to my child at least once a day till the child becomes healthy”.*

A few participants mentioned other herbs that are occasionally used. For example, roots and stems of ‘*golkankri*’ are mixed with the roots of ‘*dayala*’. Some mentioned using *hom haleko bhasma* mixed in water. A few participants mentioned that the cucumber or pumpkin-seeds and burnt calf dung are mixed and fed to the child. A mixture of ground herbs and ‘clay’ is also used to treat pneumonia but less frequently. One VDC member in Hallekalika said:

*“There are many home remedies for the treatment of pneumonia. A few people use the mud of kamal kothi, rudilo, mud of aagena, bhairaj (small herbal grass), kamero (white mud). They first grind them and then mix them in water. Many children will recover after having this mixture for only once. Some people also feed the ash of grains burnt in ‘yegya’ (a ritual) and ‘bhasmakhar”.*

The VDC members in Ganesthan mentioned that some family members give the solution made up of ‘*harro*’ or ‘*dhamirako gola*’ (ant case), ‘*bachhako gobar*’ (ash of calf dung), ‘*chuloko mato*’ (soot from the cooking stove) or burning coal. Soot or charcoal also has ‘hot effect’ and cures common cold and pneumonia. Less commonly used are the mixture of roasted ‘*leiu*’ (fungus), ash and water.

A few women had reservations regarding home care. One woman said:

*“I saw one child die taking the herbs (jadibuti). Inside the child’s body the herbs decayed and after fifteen days the child was taken to the hospital where he died”.*

#### **2.4.2. Feeding practices**

Breast-feeding is common during the episode of common cold or pneumonia, but only some women (who do not work outside in the field) continue it for more than twice a day, believing that breast-feeding more than usual is beneficial for a child with cough or cold. While most participants informed that children suffering respiratory illness can not suck breast-milk

properly due to breathing difficulties or blocked nose, only a few keep their baby's nose clean and 'try' their best to persuade the child to suck breast milk. One woman in Bageshwari said:

*“If a child has cold and his chest is bad, a mother should feed the breast milk more than usual. Also when a child has pneumonia. Sometimes the child can not suck because of cold – so we must clean the nose and try again and again”.*

Most women mentioned that when a six-month or an older child has cough, frequent feeding in small amount should be carried out. Preparing and feeding soft food called 'jvalo' is a common practice in most areas of Nuwakot. *Jvalo* is usually prepared by boiling rice and lentils together and adding 'jira' (cumin). Some participants mentioned that they continue to provide usual diet or prepare oily chapati or maize bread. The latter, they believe provide warmth to the chest of the child. One mother in Khanigaun mentioned:

*“If a small child develops pneumonia (chhauda lagne) they should be breastfed properly and given small amounts of food frequently. They should not be given cold meal, heavy rice and buffalo milk. Buffalo's milk worsens the illness and a child may develop chest indrawing - the child breathes with difficulty”.*

Most participants informed that a child loses his appetite (when he has common cold or pneumonia) and refuses to eat, therefore families should feed palatable food and continuously persuade the child to eat. One VDC member said:

*“When a child is sick with 'nepali deuta' they don't eat and mothers should try again and again. They (children) do not eat when coughing. Try to feed him biscuits – if he refuses then feed him bread”.*

Certain foods are not provided during the time when a child has pneumonia or common cold. For example, fatty (*heavy oily rice*) and sour foods like yogurt are considered to worsen a case of common cold. Some participants mentioned that cow's milk may be provided but only after dipping a burning wood or a hot charcoal in it – this they believe helps in removing the cold effect of the milk and the fat. Sour (*eg: amlo*), fatty and cold (*eg: chishu*) food is also not provided to lactating mothers as this changes the quality of milk and makes it 'cold' for the sick child. Another VDC member in Hallekalika said:

*“Mothers breastfeed the sick child. They (mothers) should not eat sour (amlo) and cold foods(chishu) as their milk becomes bad for the sick child.. Children should be given oily chapati or "naram jaulo", soft rice, daal (pulses) soup-fatty and sour foods (yogurt) must not be given.*

One mother in Khanigaun said:

*“We don't give buffalo milk to children with pneumonia. If we give we add water and drop hot charcoal in it as this removes the fat. Fat is not good for pneumonia. The child should be breastfed and given soft rice. If heavy rice is given child starts vomiting and can die”.*

A few participants mentioned that fluids such as boiled water should be given to the sick child. A few also add 'besar' (turmeric powder) into water and this solution is given to the child with respiratory infections.

### **Treatment outside home**

Participants in most areas mentioned that when a child has difficult breathing or blood in stool or are severely dehydrated or when the home remedies fail, they first contact traditional healers such as 'dhami' and 'jhankris'. They would contact health post staff, female community health volunteers and private practitioners only if the home remedies or treatment by these traditional healers fail (see ranking matrixes in annex....). This generally causes a delay of one or two days in seeking care from skilled providers. Decision to seek cure for both girl and boy child outside home is generally made by mother in laws, father in laws or husbands. One VDC member in Hallekalika said:

*“Most families will seek care from skilled providers as they believe that out of 100 children suffering from pneumonia, 40 will get cured by dhamis/jhankris. If the child does not get better within 24 hours, it is taken to Chogate hospital (Nuwakot-Bageshwari) or district hospital.*

A common belief is that angry *Nepali gods* cause pneumonia and only good Dhamis and jhankris can cure it. Most mentioned that these traditional healers are cheap and easily accessible. One Tamang woman in Bageshwari said:

*“We always contact dhamis and jhankris because they are good and pious. If a child has pneumonia we first go to a dhami. Or when the medicines of the health post staff does not work, we take the child to jankris. Children with pneumonia are under the effects of evil spirits and jhankris blows prayers and removes the spell. Jhankris only demand eggs, rice, scenty sticks and chicken in return and sometimes money”.*

Another woman in Hallekalika said:

*“If the child looks lethargic (haklak) or is unconscious they first contact traditional healers who checks whether the child is affected by bad evil spirits. If necessary the child is then taken to doctor (sub health post incharge)”.*

Most people believe that dhamis and jhankris have the power to treat common as well as diseases of serious nature. Children with cough with signs suggesting level of severity of an illness, such as fever and cough (suggesting common cold) or chest indrawing and wheezing (suggesting pneumonia / difficult breathing) are mostly treated by dhamis and jhankris. One NFE participant in Hallekalika said:

*“When a child with cough has chest indrawing and wheezing sound, we seek help from dhami/jhankri (traditional healers). If their treatment does not cure the child's condition – we then go to sub health post staff. In the health post the child is examined and medicines are prescribed”.*

One VDC (in Bageshwari) said:

*“My son had a bad wound on the heel of his foot and it was turning black. I kept the child in Trishuli hospital for 12 months but the child did not get better. I then took him to central hospital, where the doctors told me that the foot of the child has to be cut off. I got scared and took him out of the hospital. I took the child to one famous traditional healer, who saw the wound, said the prayers and bit the wound with his mouth. After 2-3 days the wound started getting better”* (he pointed his son to the PRA team).

Some choose to contact health post staff or private practitioners first when a child has pneumonia, as they consider their treatment safe, effective and cheap and their attitude favorable for their sick children. One NFE participant in Bageshwari said:

*“Health post is getting more medicines nowadays – therefore people go to Nuwakot health post when a child has cough. The doctor (health post incharge) recognizes a child’s illness easily and his treatment is very effective. We also like this ‘doctor’ because when his treatment does not work he burns the scenty-sticks and scares the evil eye. He also charges only two rupees and little amount (of money) for medicines that he buys – he also refers very sick children to Bagtar or Dhikure hospital”.*

Among those who contacted health post staff, most favored the staff’s ‘strong ability to diagnose/recognize a disease’ and the use of equipment. Frequently participants pointed out towards the importance of using stethoscope, measuring fever (*joro napchhan*) and checking pulse (*nari herchhan*). Most appreciated paying for the medicines and good treatment provided by the health post staff. A mother in Hallekalika said:

*“The sub health post doctor takes two rupees for registration and some cost of medicines. In the afternoon when the official hours are closed he charges Rs.100. He also visits us at home but he does not take money – most people pay because he checks the fever, listen to the child’s chest and give good medicines”.*

Some believed that the health post staff have increased in number over few years and it is easy to access skilled providers. They believed that in the past most people contacted traditional healers because they had no choice. One mother said:

*“A child with pneumonia should be taken to health post for check up now a days- because treatment by traditional healers is old. Now we use medicines for illness but in the past we relied on traditional healers. Now we have more health workers than before. So, we should not consult traditional healers always – the doctor examines chest, eyes, looks for fever and give medicines. We believe in Jha (Nuwakot health post Incharge). He can cure diseases just by touching the patient. He treated my child last year”*

Most VDC members mentioned that usually lack of transportation, occasional staff absenteeism and poor staff attitude encourages many people to seek care from traditional healers or buy medicines from the local pharmacies on their own. A few participants who stopped seeking care from the health posts, believed that the services are free but the staff is charging money illegally.

Some VDC members were concerned about people's attitude towards cost recovery scheme. One VDC member said:

*“Though they (people) buy fertilizer for the crops and medicine to stop diarrhea from the private medical halls and spend a lot of money to buy medicines for children with pneumonia - but they do not like to seek treatment from the health post because they don't like to pay for the medicines in the government's facility. We have inexperienced and illiterate people in our village”.*

Only a few participants mentioned that they contact an FCHV when their children suffer from pneumonia and considered her treatment effective. Generally, a significant number of people doubted an FCHV's ability to treat pneumonia. One woman in Chougada said:

*“She (FCHV) can not even apply iodine – how can she provide treatment for cough. They (FCHVs) are same as hospital and health post staff who are only interested in earning money instead of serving us people”*

#### **2.4.4. Barriers to care seeking for children suffering from pneumonia and diarrhea**

Most participants mentioned four main barriers to seek emergency care (outside home) for children suffering from pneumonia or diarrhea. These are lack of money, lack of knowledge (lack ability to identify danger signs that indicate that treatment should be sought outside home), lack of transportation and lack of skilled providers at the time of emergency (see ranking matrixes in annex.....). Poverty and lack of money (for transportation and treatment) are the most common barrier. One woman in Hallekalika said:

*“Money is everything – you can do everything with money. People don't lend money to the poor because they think poor can not pay back Before whenever my children used to get sick – they (people) did not lend money to me. Later my husband started to earn rupees 50 to 60 per day and we started taking our sick children to Nuwakot health post. Few days back my child had pneumonia he got cured by medicine given by the doctor (at Nuwakot health post)”.*

Some participants mentioned that because families depend too much on traditional homemade remedies or are located too far from skilled providers, they get delayed in seeking health care for children suffering from pneumonia. Some added that lack of permission and/or inability of a young mother to travel alone and household quarrels also delay families to seek cure outside home.

Among other barriers, a few women added lack of good quality medicines in the health posts, fieldwork and gender discrimination. A few women mentioned that some people try their best to save their sons as compared to a sick daughter. One mother mentioned:

*“If my son is sick they (family members) take him to hospital - but when my daughters become sick they don't care. They say that a son has to carry dead bodies of their parents and perform all rituals of funeral, but a daughter can not – she gets married and goes to another house- why we should spend money on her”.*

### 3. Control of Diarrheal Diseases (CDD) – community’s beliefs and practices

#### 3.1. Community’s perception of diarrhea

Most participants mentioned that diarrhea is called ‘*jhadapakhala*’ in Nepali. Some also call it ‘*undhubho*’, ‘*chherpati*’ or ‘*haiza*’ (cholera). A few also call it ‘*sukenas rog*’ (the disease that makes a child thin). Some mentioned that a child has diarrhea when he continues to pass loose stool (*tarantar* or ‘*disha garyo bhane*) or if he/she has loose stools more than three times in a day. Some added that if a child passes green, white, yellowish or foamy stools, they consider that the child has diarrhea. A few consider a child has diarrhea when he/she passes bloody or has smelly stool.

#### 3.2. Perception on when a child has diarrhea what happens to him/her

Most common known signs and symptoms in a child with diarrhea are sunken eyes, frequent loose motions and irritability (*jhin jhin rahancha*). Most participants believed that frequent loose motion causes a child to become very weak and lethargic (*layaklukluk* or *lathrakka*) and most children loose weight and become ‘thin’ (*dublo* or *khyaute*). A few children who also have blood in their stool, have abdominal pain and a desire to defecate.

Among other signs and symptoms, some participants mentioned fever, nausea, vomiting and severe water loss or dehydration (*sukha*). Some participants identified ‘increased thirst’ as a sign suggesting that a child with diarrhea is losing water. Among small children presence of a ‘depressed fontanel’ is generally considered as a sign of dehydration. Some participants mentioned that loss of appetite and inability of a child to digest food is commonly associated with the diarrhea.

A few participants mentioned that when a child has diarrhea his/her skin becomes wrinkled and dry. The child becomes weak and is unable to cry, walk or sit and pass stool unconsciously. The color of the stool becomes green or yellowish and sometimes black. Some children have cold sweating, feeble pulse, dry mouth and their skin feel cold and blue veins start appearing. A few participants mentioned that such children become unconscious if not treated in time. One woman in Hallekalika said:

*“If a child passes loose motion five to six times during morning, we know he has jhadapakhala (diarrhea). The child continues to pass watery stools (tarantar). Sometimes when the child has diarrhea he may have blood in the stools or his stool is very smelling. The child becomes weak, lethargic and has vomiting and fever. If the diarrhea continues for many days the child becomes malnourished (dublo). His intestines becomes dry (aandra sukeko) and they can not take food”.*

<u>Local terms for diarrhea</u>		<u>Local terms for signs and symptoms of diarrhea</u>	
Diarrhea	<i>Jhadapakhala, ishalagne, pet lagne, irjava, pakhala, disha deharai garyo bhane. Undhubho, chherpati</i>	Fever	<i>Joro, tatto badhi</i>
Bloody diarrhea	<i>ragat masi</i>	Irritable	<i>jhin jhin rahancha</i>
Green/yellowish	<i>Haryo disa lagema</i>	Nausea	<i>wak wak</i>
Continuous	<i>tarantar</i>	Loose weight	<i>sukra jauncha</i>
Watery stools	<i>patalo, seto disha lagema</i>	Dry intestines	<i>aandra sukeko</i>
		Sleepy eyes	<i>aankhan lola hauncha</i>
		Dehydration	<i>suka lagcha, sukha, aatisar</i>
		Thin	<i>dublo or khyaute</i>
		Lethargic	<i>layaklukluk, lathrakka</i>
		Unable to eat/drink	<i>nituk parchha</i>
		Hypothermia	<i>sitanga</i>

### 3.3. Community's perception on how diarrhea is spread

Eating cold, stale or uncovered food, drinking dirty and non-filtered water and throwing rubbish and other solid waste in and around the house are considered to be common ways in which diarrhea spreads. One PE participant in Bageshwari said:

*“Mother gives the child cold and basi (stale) food or if she feeds him too much-the child get diarrhea. Also if they (mothers) give unripe fruits. Dirty water also causes diarrhea. Also if rubbish is thrown every where in the house or the toilet is not washed properly”.*

One VDC member in Bageshwari said:

*“ Don't remember loan (rein) at the time of sleeping and don't remember dirty things at the time of eating otherwise people get sick – if people eat food that is not covered and is exposed to rats and flies”*

Some added lack of good and nourishing food that are rich in vitamins and poor personal hygiene such as not washing hands after using a latrine, keeping the baby dirty (not bathed regularly), dirty nails, and keeping the toilets dirty. Some also mentioned that absence of hygienic latrines are also reasons why diarrhea spreads in the community. One VDC member in Hallekalika said:

*“Diarrhea is caused by children playing in the dirty place and keeping a house dirty. Green flies sit on the food and if that food is given to a child he will catch diarrhea. Dirty water also causes diarrhea. If houses have no latrines or if the toilets are not constructed well. Eating stale food is also a cause of diarrhea”.*

A few participants mentioned that diarrhea is caused by food contaminated by green flies, unripe fruits, oily, spicy and sour food and by feed oily, spicy and sour food. A few believed that

diarrhea occurs in warm weather or when a child plays with other children who have diarrhea or if small babies sit in cold and damp places. A few stated that a child gets diarrhea if his/her lactating mother consumes food that has 'hot' effect. One woman in Narjamandap said:

*“Mothers who are lactating eats what ever she likes - then the baby is likely to get diarrhea. She (mothers) should not drink home made beer (jaad) and foods like cow milk, ghee or lassi (curd drink) – they (food) have hot effect”.*

Evil eyes and fear during an illness also causes diarrhea

Worshipping gods to ask for the protection of children is thought to be the most important way to prevent childhood illnesses. Most participants recommended that families should serve freshly prepared and hot meals, provide clean, boiled or filtered water and keep their house and its surrounding clean. Some stated that by keeping the food covered and encouraging family members to wash their hands after using latrine and before eating also help in preventing diarrhea. They mentioned that lactating mothers should be careful when deciding about what to eat. Oily, spicy and sour food must be avoided. Children should not be fed buffalo's milk. A few participants added that food must always be heated properly and children should be encouraged not to eat unripe fruits. They also recommended that people must construct their latrines properly in order to discourage fly breeding.

### **3.4. Practices of Home care for a child with diarrhea**

Most women shared with PRA team some of the home care practices, including home remedies. They mentioned that because most women carry out all sort of house chores and field work, they rarely have time to look after their sick children, who are usually left at home under the care of other family members. One NFE participant in Hallekalika said:

*“Women do not have enough time as they have lot of work, fetching water, cleaning cowshed and cook – even mothers with sick children have to go to the fields. But what ever we can we do for our children. We prepare soup from or daal (lentils) and 'hariyosagpat' (green vegetables) and give to the child with diarrhea. Small babies usually do not drink or take any liquid. We give 'lito' (soft food). The mother who is breastfeeding must avoid spicy food. We also give kandamul and Ratomato ( a kind herb and red clay)”.*

#### **3.4.1. Home remedies**

Most participants informed that they prepare ORS and give it to the child who has diarrhea. ORS is commonly called '*jeebanjal*'. Some also call it '*satya jeevan*' or '*nav jeevan*'. Water is also provided to most children with dehydration (*aatisar*). Some mentioned that they also provide rice and salt water, though this was common practice until ORS became available. Most participants informed that breast-feeding is continued during the episode of diarrhea. A few participants mentioned that they also give sugar salt solution (*nun chini pani*) if ORS is not available.

At least two participants in each group discussions were asked to prepare ORS separately. Only a few could demonstrate how to prepare ORS correctly. They dissolved one ORS sachet in one liter of water. Most participants added one ORS sachet in six glasses (of different sizes) of water, while some mixed one ORS sachet in three glasses of water. The rest demonstrated using different number of glasses.

At least two participants in each group discussions were asked to prepare ORS separately. Only a few could demonstrate how to prepare ORS correctly. They dissolved one ORS sachet in one liter of water. Most participants added one ORS sachet in six glasses (of different sizes) of water, while some mixed one ORS sachet in three glasses of water. A few mixed few teaspoonful of ORS in different amount of water. For example one participant added half sachet of ORS in three mana of water (two mana = 1 liter)

While most participants rely heavily upon ‘medicines that stop diarrhea’, use of local herbs is also very common – usually herbs are boiled and made into tea. For example, most participants crush and boil skin of *aambak* (?). Some make herbal tea from the leaves of ‘*tulsi*’ plant, ‘*koirala*’ (bitter guard) or black edible fern called ‘*tarro*’. Others mix crushed leaves of ‘*kandamul*’ with red mud (*rato mato*) or mix crushed dried skin of pomegranate (*anaar*). A few takes skin of *gubaa*, *koilrala*, *kala nigura* roots, *sal dhup* and *chhabkyamlo*, crush and mix them together while others use crushed roots of *kafal* and *kalo nigura*. A few people mentioned that body massage with ‘*methi*’ (mustard) oil is also beneficial for children suffering from diarrhea. One mother in Narajamandap said:

*“Once my son had diarrhea for five or six days – his skin became dry and looked so thin (dublo). A didi beheni (friend/neighbor) told me to give him crushed dry guava skin. I gave him this medicine and his diarrhea stopped. Sometimes I also give skin of kafal and roots of kaalo negro (herbs) and daal soup, joulo (soft meal) and plenty of water. They (people) told that medicines (allopathic) are important only when a child has abdominal pain. So I used home medicines”.*

Some fruits and grains are also considered to stop diarrhea or help in making stool more consistent. For example, most people use crushed skin of dried guava or pomegranate. *Harro*, a dry fruit is also used commonly. The fruit is burnt and given to a child to chew or it is crushed and boiled in water. A few people also feed crushed bud of banana fruit (*kerako bunga*). Beaten maize mixed in yogurt is also commonly used when a child has diarrhea.

### **3.4.2. Feeding practices during the episode of diarrhea**

While most children suffering from diarrhea are fed as usual, some increase the frequency of feeding three to four times a day if they could afford. Warm and soft food prepared by mixing pulses, cereals and vegetables is commonly provided. For example, lentil/daal or vegetable soup and ‘*lito*’, a mixture of flour, milk, salt and sugar are provided three to four times a day. Others prepare soft food ‘*jualo*’ from rice, daal or vegetables.

Some participants mentioned that they also feed freshly cooked green vegetables such as spinach (*sagsubji* or *hariyo sagpat*), ‘*gedagudi*’ (soft food like *jualo*), and vegetable soup. A few also

provide biscuits, 'pharshi' (pumpkin), 'kankro' (cucumber), 'pakeko mewa' (papaya) and 'aamp' (mango).

Most participants mentioned that 'hot food' such as fish and other spicy and sour food should not be fed to child with diarrhea. They also mentioned that lactating mothers should also avoid spicy and sour food and local beer called 'jaand'.

One mother in Bageshwari said:

*"We give more breast milk when a child has diarrhea, especially the very small ones. We give jeeban jal (ORS) and soup made up of daal (lentils). I make soft food made up of sagsabji (vegetable), pharsi (pumpkin), kankro (cucumber) and pakeko mewa (papaya). Sometimes I also give aamp (mango). If the child does not get better we go to the health post in Nuwakot or buy 'diarrhea stopping' medicines from bazaar".*

One mother (Tamang) said:

*"I know that daal soup and feeding good food is good for children with diarrhea. But where to get money to feed daal soup - we don't feed".*

### **3.4.3. Seeking care for a child with diarrhea outside home**

If children suffering from diarrhea, develop loss of appetite, are unable to eat, have continuous watery stools and are unable to stand or walk, most participants would consider these as danger signs and a signal to seek cure outside home.

Some participants added that if children with diarrhea look lethargic and their eyes look sleepy or are restless, or are unable to suck breast-milk they would contact skilled providers. One PE participant said:

*"If the child does not suck breast milk I always think that the child is very serious. In this time, we are so in such a hurry to get treatment outside".*

A few added that they would seek treatment outside home if their child had blood in the stool or are hypothermic or are unconscious. One VDC member in Hallekalika said:

*"If the child is unable to eat or drink (nitek parchha) or has continuous watery stool or is unconsciousness or has hypothermia (sitanga,) they first seek help from a dhami or jhanri (traditional healers) and if needed go to the health post".*

Generally, a mother may decide to seek treatment from a skilled provider outside home, but the in-laws and husbands usually make the decision about the source of treatment. Sometimes neighbors would help in making such decisions. Most of the time people try home remedies for several days and if the child does not get better they then seek help first from a 'dhami/jhankri' (traditional healer). A few believed that diarrhea is caused by evil spirits therefore visiting

jhankris is important, as they can scare away evil spirits or decide the fate of a child by looking at his palm. One NFE participant in Hallekalika said:

*“Families first try home remedies for one or two days – they wait and see if the child gets better. Then they take the child to a dhami (traditional healer) and when a child is closing his eyes and does not suck the breast then only people take him to a doctor – dhamis are cheap – people only pay in the form of eggs or chickens”.*

One VDC member in Ganesthan said:

*“Diarrhea is caused by 'lagan', (unhappy gods 'devideuta') and 'aatma kamjor junu' (weak soul), therefore people see 'dhamis/jhankris'. They (dhamis/Jhankris) say prayers and remove the effect of evil spirits. People must offer sacrifice after the child becomes well – to fulfill the promise made to the gods”.*

Most people also contact health staff in the health posts, but generally after several days of trying home remedies and visiting traditional healers. They mentioned that most children would get better with home remedies in a few days. Those who took their sick children to health post appreciated the quality of services and advised offered to them. One woman said:

*“The doctor in the clinic provides medicines, ORS and advice. They (medical staff) teach us how to prepare jeevan jal (ORS) and look after children with diarrhea. They also refer very sick children to hospital in Nuwakot.(Although) the treatment at the clinic is very expensive, but “ke garnu aaphno bachcha ko lagi gharbari bechnu pare 'ni ta' bechnu paryo ni” (we do not hesitate to sell our assets to save our children.)”*

Some participants informed that many people complain about the services of the health posts. Either the health post staff is absent or there is a shortage of medicines. Therefore, they prefer to contact traditional healers or private practitioners or buy medicines from the bazaar on their own. One PE participant said:

*“ In our village health post there is no doctor and medicine - if the doctor is there we still have to buy medicines from bazaar – so we do not take the child to health post – we prefer private clinic. If the clinic does not care – we go to hospital in Trishuli”.*

If the home remedies or the treatment of a traditional healer fail, some would go to a local pharmacy to buy medicines that can stop diarrhea. If the child does recover, only then they take him/her to the doctors in Nuwakot, Dhikure, Battar and Bagtar hospitals. Some women mentioned that only those who have money take their children to a private doctor or travel long distances to hospitals located in the towns. Poor usually contact traditional healers or buy medicines in the bazaar. Very few mentioned that they seek help from local FCHVs. A few thought that FCHVs are illiterate and are unable to treat diarrhea.

## 4. Community's perception regarding Child Spacing

### 4.1. How couples decide to opt for different family planning methods.

Most participants believed that it is enough to have two to three children in a family, because it is good for mother's health and easier to look after them and provide good quality food and education. But, desire to have sons does not allow women to space their children. One mother of eight children in Ganesthan said:

*"I have many children because I did not have a son. If I did not have a son, the husband would have scolded me all my life - and now I have one and my husband does not beat me - he is very happy".*

One woman (in Chougada) said:

*"At least we try to get two sons - they (community people) say 'one eye what an eye (no good) - one son what a son (not enough)'*

Most women in the group discussions desired for lesser children and believed that, women should 'neither carry nor deliver many children - they should remain healthy, stay alive and look after their children'. Some chose family planning because there were 'too many mouth to feed' and 'poverty and lack of good quality food and education'. One woman in Hallekalika said:

*"You can grow the number of children - but you can not expand the land and grow more food to feed them - therefore family planning should be adopted".*

While most women use a modern family planning method, it is usually the couple, most of the time, that decides to opt for family planning and choose a certain method. Most young couples choose temporary family planning methods (commonly used is injection depo-provera). Among permanent methods, 'tubal ligation' is more common among those who have many children or where the temporary method failed (due to side effects). Generally, family members do not desire vasectomy because they believe that the procedure makes the men weak and useless for fieldwork. Religious reason is another barrier for men to go for vasectomy - a common belief is that 'sterilized' men can not carry out most of the burial rituals. One Tamang woman in Bageshwari told her story:

*"If men went for permanent sterilization, he is not allowed to offer water to the dead person. I was told by my mother-in-law. So I decided to do it (permanent method) myself. After having four children the family did not allowed for me to do the operation that is why I ran a way from the home to Trishuli hospital during the time of the family planning campaign and I did the operation. When I returned back to home nobody said anything - I think that in their opinion the permanent sterilization is not allowed to the son but because I am a woman they did not say anything to me".*

Generally, permanent sterilization is linked to weakness and a person's inability to carry out heavy work. A few men had opted for vasectomy because they did not want their wives to stop the heavy work they carry outside. Only one mother (in Bageshwari) said:

*"My husband told me that you have to do lot of work. Because we are living in the hills most of the work you have to complete therefore my husband said that I will 'bandha kere' ( do permanent sterilization)".*

Nearly 50% of all participants were practicing a modern family planning method and most of them were women. Most of the time, women make a decision on their own to adopt a family planning procedure because of 'fear from producing too many children' and 'too tired of delivering every year'. One woman in Ganesthan said:

*"We are facing problems ourselves, we are solving the problem ourselves. If the husband did not care - we ourselves go for the permanent sterilization".*

Another said:

*"Husbands are not giving birth or cutting grass in the hills – they also don't graze their cattle – that's why we are deciding to adopt family planning"*

#### **4. 2. Concerns of users about family planning methods**

While most were satisfied with 'tubal ligation', a few had concerns. They mentioned that after they had adopted this method, they feel lazy, weak and have low backache. One woman in Bageshwari said:

*"After the operation (tubal ligation), I feel lack of blood, laziness and lower part of my back aches. My back aches more during field work – sometimes I feel throbbing pain in operation area".*

One mother in Ganesthan said:

*"I have many children this is why I went to Bagtar (district hospital) with my friend. The doctor took me in the examination room and examined my abdomen. I don't know what the doctor did, that I can not produce more children – and there is a scar on my abdomen".*

Most women mentioned that abdominal distention, nausea, loss of appetite, dizziness, weakness, swelling of hands and feet, weight loss, irregular menstruation and heavy bleeding are side effects of some methods due to which people keep on switching from one method to another. A

few mothers mentioned that they switched from injections to copper T due to traveling long distances every three months. One mother said:

*“ At first I was started taking sangini (injection depo-provera) and had to go every three months to the health post. I found it difficult, so I decided to use copper-T and this is for ten years.”*

Another woman said:

*“ I decided not to use an object (copper-T) inside my body as it moves in other parts of the body and can cause harm- we should never use this method”*

Some participants informed that some of the people who were using family planning stopped due to fear of death. They believed that, women who ever used injection depo-provera, get pregnant and deliver again, they may develop heavy postpartum bleeding and can die. One female VDC member in Ganesthan said:

*“There were two women who developed heavy bleeding (vaginal) after delivery. One died soon after delivery and the other was referred to a hospital and was saved. They both heavy postpartum bleeding and both were using injection Depo-Provera before they became pregnant. Therefore I am are afraid to use this injection – I use copper-T”.*

During the group discussions, some women mentioned that they stopped using a family planning method because the family members did not want them to continue. A few stopped because friends and family members consider family planning a fashion for the rich people and not *dukhi* (poor).

#### **4.3. Where do users get family planning methods of their choice.**

While most participants informed that they get their supplies of family planning method from the local health post and sub-health posts, some mentioned that they get their supplies during family planning campaigns or from local pharmacies. In most areas, in Nuwakot, almost all family planning methods such dhaal (condom), kamal Chakki (foam tablet), gulaph chakki (pills), sangini (depo-provera injections) are available in clinics, medical shops and health post. Very few participants reported shortage of injection depo-provera in the health posts. Those who prefer copper-T get it in Trishuli hospital.

#### **4.4. Perception of non-users about family planning**

Lack of knowledge about family planning and its different methods was one of the main reasons why most non-users (group discussions) were not practicing family planning. Among other common reasons was fear from death. ‘It is like committing suicide’ said one woman in Ganesthan. Some women were afraid of side effects of family planning methods. For example

they mentioned that most methods cause ‘kammar dukhne’ (back pain), bleeding, ‘ragat kam hune bhayera’ (causes anemia), ‘ringata lagne’ (nausea) and ‘mahinawari banda hune bhayera’ (irregular menstruation).

Some participants who had only heard about permanent family planning methods were afraid of the after effects of tubal ligation and vasectomy. Generally, they thought that sterilization makes a person weak, useless for the field-work and vulnerable to different diseases. One woman (in Chougada) said:

*“In other places people eat 'dhindo' so they are healthy, here people eat rice so they are not healthy, therefore we do not like to go for ‘apraision’ (permanent methods) – for men this makes them weak and lack of food makes it even worse – they can get different kind of illnesses ”*

A few women, who favored permanent methods, believed that rest is very important after the surgery (permanent sterilization). Because most women and men are busy doing intensive house chores and fieldwork and rarely get some rest, they had still not decided to go for permanent methods.

Desire to have more sons is a common reason that most young women (non-users) were not practicing family planning. They mentioned that sons are important to inherit property and carry out burial rituals of their parents. Most women (non-users) were afraid that if they did not bear sons, their husbands would marry again. One woman said:

*“Before I became pregnant every one in the village said I have to give birth to a son. So I did not use any method (family planning) - recently I gave birth to a daughter - I will not use the family planning things, because my husband will marry another woman”*

One woman in chougada said:

*“I have five six daughters and my husband tells me not use chaki or sangini. I tried once but my husband scolded me and said that I should bring a son. He scolds and hits me when he is drunk.*

One VDC member in Chougada said:

*“Only men worships on some occasion and for that particular task (worshipping) they need at least one son”.*

Another VDC member in Chougada said:

*“ Daughter never can be as sons, because they have to go to others house after marriage and who will take care of us in old age”.*

One woman (in Chougada) said:

*“In other places people eat 'dhindo' so they are healthy, here people eat rice so they are not healthy, therefore they do not like to go for permanent methods – methods for men make them weak and lack of food makes it even worse”*

Religious reason is another barrier. Usually people link permanent sterilization method to castration and castrated men are not seen eligible to perform any religious and burial rituals. Among muslims, permanent methods are generally prohibited by Islam. One Tamang woman in Bageshwari said:

*“Hamro sasuharule khasi deotalai chaldaina bhanchan tehi bhayera operation garna dindaina (My in laws did not allow for sterilization (vasectomy) - my mother-in-law said that castrated goat is not offer for the god).*

Another, a muslim woman said:

*“In our religion we can not perform permanent sterilization. We can use temporary methods like pills, match sticks (Norplant) and injections – but no permanent method”.*

A few participants reported that shyness (to ask about family planning) and high child mortality are some other of the other reasons why some people do not practice family planning.