Plan International USA, Inc.
d/b/a Plan USA

Local Innovation for Better Outcomes for Neonates Project (LIBON):

Sunsari, Parsa and Bara Districts of Nepal

PLAN Nepal Child Survival Project XXII

Cooperative Agreement No. GHN-A-00-07-00006-00

30 September 2007 – 29 September 2011

Detailed Implementation Plan

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Report Prepared
By

Sandra Wilcox, Consultant

Lisa Bowen, RMN Health Advisor, Plan USA

Laban Tsuma, Program Development Officer and Child Survival Advisor, Plan USA

Frank Manfredi, Program Development Officer for Asia, Plan USA

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LIST OF ACRONYMS

AHW	Auxiliary Health Worker
ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
BCC	Behavior Change Communication
BPP	Birth Preparedness Package
CB-IMCI	Community-based Integrated Management of Childhood Illness
CB-NCP	Community-based Neonatal Care Package
CBO	Community-based Organization
CDK	Clean Delivery Kit
CDP	Community Drug Program
CHD	Child Health Division (MoHP)
CHW	Community Health Worker
CHX	Chlorhexidine
CS	Child Survival
CSHGP	Child Survival and Health Grants Program
CSSA	Child Survival Sustainability Assessment
CSTS+	Child Survival Technical Support +
CWC	Community Welfare Center (Bara NGO Partner)
DAG	Disadvantaged Group
DDC	District Development Committee
DHO	District Public Health Office
DHS	Demographic and Health Survey
DIP	Detailed Implementation Plan
DPHO	District Public Health Office
DTOT	District Training of Trainers
EOP	End of Project
FCHV	Female Community Health Volunteer
FE	Final Evaluation
FHD	Family Health Division (MoHP)
FP	Family Planning
GoN	Government of Nepal
HA	Health Assistant
HF	Health Facility
HFMC	Health Facility Management Committee
HMIS	Health Management Information System
HQ	Headquarters
HP	Health Post
IEC	Information, Education, Communication
IMCHO	Integrated Mother and Child Health Organization (Bara NGO Partner)
IMCI	Integrated Management of Childhood Illness
IOM	Institute of Medicine
ITN	Insecticide-treated Bednet
JHU	Johns Hopkins University
JSI	John Snow International

KPC	Knowledge, Practice and Coverage
LBW	Low Birth Weight
LIBON	Local Innovation for Better Outcomes for Neonates
LQAS	Lot Quality Assurance Sampling
MCHW	Maternal and Child Health Worker
M&E	Monitoring and Evaluation
MINI	Morang Innovative Neonatal Intervention
MNC	Maternal Neonatal (or Newborn) Care
MNCH	Maternal, Neonatal and Child Health
MoHP	Ministry of Health and Population
MOT	Mode of Transmission
MOU	Memorandum of Understanding
MTOT	Master Training of Trainers
NFHP	National Family Health Program
NGO	Non-governmental Organization
NHEICC	National Health Education and Information Communication Center
NHSP-IH	Nepal Health Sector Programme – Implementation Plan
NNH	Neonatal Health
NNM	Neonatal Mortality
OP	Output
OR	Operations Research
ORC	Outreach Clinic
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PHC	Primary Health Center
PHCU	Primary Health Care Unit
PMP	Performance Monitoring Plan
PNC	Postnatal Care
POU	Point of Use
PSBI	Possible Severe Bacterial Infection
PVO	Private Voluntary Organization
PWG	Pregnant Women's Group
RCSD	Resource Center for Sustainable Development (Sunsari NGO Partner)
RHC	Reproductive Health Committee
RHCC	Reproductive Health Coordination Committee
RHFA	Rapid Health Facility Assessment
RYC	Ramgun's Youth Club (Sunsari NGO partner)
SA	Supervision Area
SBA	Skilled Birth Attendance/Attendant
SHP	Sub Health Post
SLC	School Leaving Certificate
SM	Safe Motherhood
STD	Sexually Transmitted Disease
TBA	Traditional Birth Attendant
TRM	Technical Reference Material
TT	Tetanus Toxoid

UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USG	United States Government
VDC	Village Development Committee
VHW	Village Health Worker
WHO	World Health Organization
WRA	Women of Reproductive Age

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A. EXECUTIVE SUMMARY

Plan USA is implementing its four-year Child Survival XXII project entitled "Local Innovation for Better Outcomes for Neonates (LIBON)" in partnership with the Ministry of Health and Population (MoHP) in the Bara, Sunsari and Parsa districts of Nepal. These districts are located in the Eastern and Central development regions in the Terai, a lowland area that extends along the Indian border.

Plan designed the LIBON project to respond to the complex situation that Nepal faces as it tries to respond to its long-standing development goals while simultaneously adjusting to a new and changing political environment. While Nepal has made significant progress in reducing its under-five mortality rate, it continues to face high neonatal mortality. Prenatal and post-delivery check-ups, use of clean birth kits and prevention of hypothermia are just a few measures to decrease neonatal mortality that are currently underused by mothers and those who assist them during and after delivery. In Nepal's traditional culture, women's status is low and they have almost negligible participation in decision-making concerning themselves and their children's health. Additionally, Nepal's health delivery system is restricted at the community level by lack of trained staff, equipment and drugs.

The Bara, Sunsari and Parsa districts have a total of population of 1.97 million, accounting for 7.34 percent of the country's population. Of this population, 51% (1,003,056) are male and 49% (963,721) are female. In the three districts, there are 52,214 infants aged 0-11 months; 54,519 children aged 12–23 months; 161,609 children aged 24-59 months and 374,819 women of reproductive age. The LIBON project will target all these age groups reaching a total beneficiary population of 643,161.[1]

The LIBON project goal is: To Sustainably Reduce the Burden of Neonatal Mortality in Nepal.

This goal will be achieved through the implementation of the following results:

Result 1: Increased Access to Neonatal Health (NNH) Services in Sunsari and Parsa
Result 2: Increased Demand for NNH Services in Sunsari and Parsa
Result 3: Increased Quality of NNH Services in Sunsari and Parsa
Result 4: Strengthened Support for Neonatal Mortality (NNM) Reduction in Nepal

The following strategies inform the LIBON program design:

- Community-based Service Delivery
- Community Mobilization
- Health Systems Strengthening
- Stakeholder Sharing and Collaboration
- Social Inclusion

The LIBON project will dedicate 100 percent of its efforts to maternal and newborn care. In order to meet the above results, Plan will: 1) contribute to the development and roll out of the

[1] Government of Nepal: Central Bureau of Statistics. 2002. *Population Census 2001: National Report*. Kathmandu: HMG/Nepal, National Planning Commission.

MoHP's Community-based Neonatal Care Package (CB-NCP) and its seven program components; facilitate and promote community mobilization and information, education, communication (IEC)/behavior change communication (BCC) efforts including those that proved successful in Plan's previous child survival (CS) project; 2) build capacity at the central, district and village levels to make data-driven decisions using information collected from knowledge, practice and coverage (KPC) questionnaires through the application of Lot Quality Assurance Sampling (LQAS) methods, and through application of the Child Survival Sustainability Assessment (CSSA) and 3) generate and disseminate NNH information to stimulate national level policy dialogue on nationwide implementation of LIBON's innovative interventions through its partnership with the MoHP.

LIBON activities will span from community level to national policy level. At the community level Plan will implement activities to reduce neonatal mortality through local organizations such as Pregnant Women's Groups (PWGs), a model transferred from Plan's previous child survival project. Plan will continue to partner with Village Development Committees (VDCs) and District Development Committees (DDCs) to support appropriate health service delivery at each level. To assist with training and organization at the local level, Plan will continue to work with local non-governmental organizations (NGOs) such as the Community Welfare Center (CWC) and the Integrated Mother and Child Health Organization (IMCHO); staff from both of these were involved in the implementation of previous CS projects. To implement LIBON's activities at the central level, Plan will continue to work in collaboration with MoHP staff, particularly in the Divisions of Child and Family Health, and staff in the Institute of Medicine (IOM) of Tribhuvan University. At the central level, the role of the Divisions of Child and Family Health will be to guide and work with Plan through its technical subcommittees and health system, in the implementation of the CB-NCP in coordination with its community-based integrated management of childhood illness (CB-IMCI) strategy. The role of the IOM will be to collaborate with the project in conducting the LQAS/KPC surveys at baseline, mid-term, and final evaluations, in integrating this expertise into its academic programs at Tribhuvan University and in continuing to build and sustain this technical capability in Nepal. The role of the local MoHP/District Public Health Office (DHO) system will be to secure the participation of key local actors (DDC, VDC, DHO, NGOs) in the detailed planning, implementation and monitoring of the field implementation of the CB-NCP.

This is a Standard category project of the Child Survival and Health Grants Program (CSHGP) for an intervention to reduce neonatal mortality in Nepal. It has a start date of September 30, 2007, and an end date of September 29, 2011. The total budget is $2,054,631, with the United States Agency for International Development (USAID) contributing $1,494,337 and Plan contributing $560,294. This plan has been reviewed and discussed with D.P. Raman, Technical Advisor for Child Health activities in the Office of Health and Family Planning at the USAID mission in Nepal. The Plan contact person in Nepal is Mr. Prem Shukla, Country Director, and at headquarters both Paige Best and Laban Tsuma are contacts. The main authors of the Detailed Implementation Plan (DIP) are: LIBON Project Coordinator, Bhagawan Das Shrestha; Plan Nepal Health Coordinator, Sher Bahadur Rana; LIBON Monitoring and Evaluation Officer, Dipak Dahal; the outgoing Reproductive, Maternal and Newborn Health Advisor at Plan USA, Lisa Bowen; and consultant, Sandra Wilcox.

B. CSHGP DATA FORM

Child Survival and Health Grants Program Project Summary
29 July 2008
PLAN International
(Nepal)

General Project Information:

- **Cooperative Agreement Number:** GHN-A-00-07-00006
- **Project Grant Cycle:** 22
- **Project Dates:** 10/1/2007 - 9/30/2011
- **Project Type:** Standard

PLAN Headquarters Technical Backstop: Lisa Bowen

Field Program Manager: Bhagawan Das Shrestha

Midterm Evaluator: To be determined

Final Evaluator: To be determined

USAID Mission Contact: D.P. Raman

Field Program Manager Information:

- **Name:** Bhagawan Das Shrestha
- **Address:** C/O Plan Nepal Country Office, Lalitpur
- **Phone:** +977 11 490 469; +977-1-5535580
- **Fax:** +977-1-5536431
- **E-mail:** bhagawan_das_shrestha@plan-international.org

Alternate Field Contact:

- **Name:** Sher Bahadur Rana
- **Address:** Plan Nepal Country Office, Lalitpur
- **Phone:** +977-1-5535580
- **Fax:** +977-1-5536431
- **E-mail:** Sherbahadur.Rana@plan-international.org

Funding Information:

- **USAID Funding:** (US $): $1,494,337
- **PVO match:** (US $) $543,737

Project Information:

- **Description:**
  The LIBON Project goal is to Sustainably Reduce the Burden of Neonatal Mortality in Nepal. This goal will be achieved through the implementation of the following results:

Result 1: Increased Access to NNH Services in Sunsari and Parsa
Result 2: Increased Demand for NNH Services in Sunsari and Parsa
Result 3: Increased Quality of NNH Services in Sunsari and Parsa
Result 4: Strengthened support for NNM reduction in Nepal

The following strategies inform the LIBON program design:

- Community Based Service Delivery
- Community Mobilization
- Health Systems Strengthening
- Stakeholder Sharing and Collaboration
- Social Inclusion

- **Location:** Bara, Sunsari and Parsa Districts of Nepal.
- **Project Partners: Partner Type**
  The Institute of Medicine (IOM) of Tribhuvan University: Collaborating Partner
  Government of Nepal, Ministry of Health and Population, Child Health Division (CHD) and Family Health Division (FHD): Collaborating Partner
  Community Welfare Center (CWC): Subgrantee
  Integrated Mother and Child Health Organization (IMCHO): Subgrantee
  Resource Center for Sustainable Development (RCSD): Subgrantee
  Ramgun's Youth Club (RYC): Subgrantee
- **Project Sub Areas:**
  Sunsari District
  Parsa District
  Bara District

General Strategies Planned: Strengthen Decentralized Health System

Monitoring and Evaluation (M&E) Assessment Strategies:

- KPC Survey
- Lot Quality Assurance Sampling
- Community-based Monitoring Techniques

Behavior Change Communication Strategies:

- Mass Media
- Interpersonal Communication
- Peer Communication
- Support Groups

Groups targeted for Capacity Building:

- Private Voluntary Organizations (PVOs)
- Non-government Partners
- Other Private Sector
- Government
- Community

- CS Project Team
- Local NGO (None Selected)
- Networked Group
- District Health System
- Health Facility Staff
- Other National Ministries
- Health Community-based Organizations (CBOs)
- Community Health Workers (CHWs)

Interventions/Program Components:

- **Maternal & Newborn Care (100 %)**
  - Integrated Management of Childhood Illness (IMCI) Integration
  - CHW Training
  - Health Facility (HF) Training
  - Emergency Obstetric Care
  - Neonatal Tetanus
  - Recognition of Danger Signs
  - Newborn Care
  - Postpartum Care
  - Delay First Pregnancy
  - Child Spacing
  - Integration with Iron and Folate
  - Birth Plans

Target Beneficiaries:

Sunsari District; Parsa District; Bara District; Total Beneficiaries

- Infants < 12 months: 18,837; 15,697; 17,680; 52,214
- Children 12-23 months: 19,286; 16,617; 18,616; 54,519
- Children 0-23 months: 38,123; 32,314; 36,296; 106,733
- Children 24-59 months: 56,785; 49,533; 55,291; 161,609
- Children 0-59 months: 94,908; 81,847; 91,587; 268,342
- Women 15-49 years: 139,344; 110,422; 125,053; 374,819
- Population of Target Area: 733,919; 580,572; 652,286; 1,966,777

Rapid Catch Indicators:

LQAS sampling methodology was used for this survey

ADEQUATE CHILD SPACING

Description: Percentage of children age 0-23 months who were born at least 24 months after the previous surviving child

Numerator: Number of children age 0-23 months whose birth date is at least 24 months after the previous sibling's date of birth

Denominator: Number of children age 0-23 months in the survey who have an older sibling

Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits

Sunsari District; 0; 0; 0.0%; 0.0
Parsa District; 0; 0; 0.0%; 0.0
Bara District; 0; 0; 0.0%; 0.0

MATERNAL TETANUS TOXOID (TT) VACCINATION
Description: Percentage of mothers with children age 0-23 months who received at least two tetanus toxoid vaccinations before the birth of their youngest child
Numerator: Number of mothers with children age 0-23 months who received at least two tetanus toxoid vaccinations before the birth of their youngest child
Denominator: Number of mothers of children age 0-23 months in the survey
Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits
Sunsari District; 222; 285; 77.9%; 4.8
Parsa District; 231; 247; 93.5%; 3.1
Bara District; 0; 0; 0.0%; 0.0

SKILLED BIRTH ATTENDANCE
Description: Percentage of children age 0-23 months whose births were attended by skilled personnel
Numerator: Number of children age 0-23 months whose birth was attended by a doctor, nurse, midwife or auxiliary midwife
Denominator: Number of mothers of children age 0-23 months in the survey
Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits
Sunsari District; 140; 285; 49.1%; 5.8
Parsa District; 92; 247; 37.2%; 6.0
Bara District; 0; 0; 0.0%; 0.0

POSTNATAL VISIT TO CHECK ON THE NEWBORN WITHIN THE FIRST 3 DAYS AFTER BIRTH
Description: Percentage of children age 0-23 months who received a postnatal visit from an appropriately trained health worker within 3 days after the birth of the youngest child
Numerator: Number of children age 0-23 months who received a postnatal visit within three days after birth by an appropriate health worker
Denominator: Number of children age 0-23 months in the survey
Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits
Sunsari District; 116; 285; 40.7%; 5.7
Parsa District; 64; 247; 25.9%; 5.5
Bara District; 0; 0; 0.0%; 0.0

EXCLUSIVE BREASTFEEDING
Description: Percentage of children age 0-5 months who were exclusively breastfed during the last 24 hours
Numerator: Number of children age 0-5 months who drank breast milk in the previous 24 hours and did not drink any other liquids or eat any foods in the previous 24 hours
Denominator: Number of children age 0-5 months in the survey
Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits
Sunsari District; 95; 126; 75.4%; 7.5

Parsa District; 75; 88; 85.2%; 7.4
Bara District; 0; 0; 0.0%; 0.0

INFANT AND YOUNG CHILD FEEDING
Description: Percent of infants and young children age 6-23 months fed according to a minimum of appropriate feeding practices.
Numerator: Number of infants and young children age 6-23 months fed according to a minimum of appropriate feeding practices
Denominator: Number of children age 6-23 months in the survey
Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits
Sunsari District; 110; 159; 69.2%; 7.2
Parsa District; 50; 159; 31.4%; 7.2
Bara District; 0; 0; 0.0%; 0.0

VITAMIN A SUPPLEMENTATION
Description: Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months (Mother's recall)
Numerator: Number of children age 6-23 months who received a dose of Vitamin A in the last 6 months
Denominator: Number of children age 6-23 months in the survey
Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits
Sunsari District; 0; 285; 0.0%; 0.0
Parsa District; 4; 159; 2.5%; 2.4
Bara District; 0; 0; 0.0%; 0.0

MEASLES VACCINATION
Description: Percentage of children age 12-23 months who received a measles vaccination
Numerator: Number of children age 12-23 months who received a measles vaccination by the time of the interview as seen on the card or recalled by the mother
Denominator: Number of children age 12-23 months in the survey
Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits
Sunsari District; 66; 93; 71.0%; 9.2
Parsa District; 58; 107; 54.2%; 9.4
Bara District; 0; 0; 0.0%; 0.0

DPT1
Description: Percentage of children age 12-23 months who received a DPT1 vaccination before they reached 12 months
Numerator: Number of children age 12-23 months who received DPT1 vaccination before they reached 12 months
Denominator: Number of children age 12-23 months in the survey
Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits
Sunsari District; 75; 93; 80.6%; 8.0
Parsa District; 87; 107; 81.3%; 7.4
Bara District; 0; 0; 0.0%; 0.0

DPT3

Description: Percentage of children age 12-23 months who received a DPT3 vaccination before they reached 12 months

Numerator: Number of children age 12-23 months who received DPT3 vaccination before they reached 12 months

Denominator: Number of children age 12-23 months in the survey

Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits

Sunsari District; 70; 93; 75.3%; 8.8

Parsa District; 75; 107; 70.1%; 8.7

Bara District; 0; 0; 0.0%; 0.0

CHILD WITH FEVER RECEIVES APPROPROPRIATE ANTIMALARIAL TREATMENT

Description: Percentage of children age 0-23 months with a febrile episode during the last two weeks who were treated with an effective antimalarial drug within 24 hours after the fever began

Numerator: Number of children age 0-23 months with a febrile episode that ended during the last two weeks and who sought treatment within 24 hours AND was treated with an appropriate antimalarial drug

Denominator: Number of children age 0-23 months with a febrile episode in the last two weeks

Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits

Sunsari District; 4; 75; 5.3%; 5.1

Parsa District; 4; 52; 7.7%; 7.2

Bara District; 0; 0; 0.0%; 0.0

ORAL REHYDRATION THERAPY (ORT) USE

Description: Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution (ORS) and/or recommended home fluids.

Numerator: Number of children age 0-23 months with diarrhea in the last two weeks and who received ORS and/or recommended home fluids

Denominator: Number of children age 0-23 months who had diarrhea in the last two weeks

Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits

Sunsari District; 21; 58; 36.2%; 12.4

Parsa District; 11; 34; 32.4%; 15.7

Bara District; 0; 0; 0.0%; 0.0

APPROPRIATE CARE SEEKING FOR PNEUMONIA

Description: Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider.

Numerator: Number of children age 0-23 months with chest-related cough and difficult breathing in the last two weeks who were taken to an appropriate health provider AND who were taken to an appropriate health provider

Denominator: Number of children age 0-23 months with chest-related cough in the last two weeks

Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits

Sunsari District; 54; 69; 78.3%; 9.7

Parsa District; 33; 88; 37.5%; 10.1

Bara District; 0; 0; 0.0%; 0.0

POINT OF USE (POU)
Description: Percentage of households of children age 0-23 months that treat water effectively.
Numerator: Number of households with children age 0-23 months that treat water effectively
Denominator: Number of households with children age 0-23 months
Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits
Sunsari District; 108; 285; 37.9%; 5.6
Parsa District; 17; 247; 6.9%; 3.2
Bara District; 0; 0; 0.0%; 0.0

APPROPRIATE HAND WASHING PRACTICES
Description: Percentage of mothers of children 0-23 months who live in a household with soap or a locally appropriate cleanser at the place for hand washing that and who washed their hands with soap at least 2 of the appropriate times during the day or night before the interview
Numerator: Number of mothers of children age 0-23 months who live in households with soap at the place for hand washing and washed their hands with soap at least 2 of the appropriate times during a 24 hour recall period
Denominator: Number of mothers of children age 0-23 months in the survey
Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits
Sunsari District; 180; 285; 63.2%; 5.6
Parsa District; 144; 247; 58.3%; 6.1
Bara District; 0; 0; 0.0%; 0.0

CHILD SLEEPS UNDER AN INSECTICIDE-TREATED BEDNET (ITN)
Description: Percentage of children age 0-23 months who slept under an ITN (in malaria risk areas, where bed net use is effective) the previous night. This indicator should be used for programs in Africa. In Asia, this indicator should be used in specific geographic areas where bednet use is recommended.
Numerator: Number of children age 0-23 months who slept under an ITN the previous night
Denominator: Number of mothers of children age 0-23 months in the survey
Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits
Sunsari District; 0; 285; 0.0%; 0.0
Parsa District; 0; 247; 0.0%; 0.0
Bara District; 0; 0; 0.0%; 0.0

UNDERWEIGHT
Description: Percentage of children 0-23 months who are underweight (-2 SD for the median weight for age, according to WHO/NCHS reference population)
Numerator: Number of children age 0-23 months with weight/age -2 SD for median weight for age, according to WHO/NCHS reference population
Denominator: Number of mothers of children age 0-23 months in the survey
Sub Area Name; Numerator; Denominator; Percent (calculated); Confidence Limits
Sunsari District; 253; 285; 88.8%; 3.7
Parsa District; 29; 247; 11.7%; 4.0
Bara District; 0; 0; 0.0%; 0.0

C. REVISIONS

Revisions based on DIP Review	
DIP Reviewers' Suggestion	**Response**
Include description of key challenges of implementing the Community-based Neonatal Care package, jointly identified by Plan and CARE (as written in email to Nazo Kureshy on 6/15).	Challenges are explained in the Budget section, Part D, below, as well as incorporated into the Program Description, Section 2g.
Revise Results Framework according to CSHGP guidance in the M&E technical reference materials (TRMs). Define indicators, data collection methods, and update end-of-project (EOP) targets.	The Results Framework has been revised and incorporated (see Diagram 1). The Program Monitoring and Evaluation section, Section 3, has been updated to reflect this change. Indicators, data collection methods, and EOP targets are described in Section 3.
Include CS XVII Bara Final Evaluation (FE) indicator values as baseline values and articulate plan to maintain FE levels.	Bara FE values are demonstrated as LIBON baseline values for LIBON in Section 3 and the Bara FE is included in Annex 5. The strategy for maintaining these values is articulated in the Program Description, Section 2, page 21.
Describe plans to track social inclusion.	Social inclusion cross-cutting strategy is explained in Section 2c Social Inclusion, as well as the results and indicators table (Table 6) in Section 3, page 50.
Describe how the project will operationalize and document simultaneous neonatal and postpartum vitamin A supplementation if neonatal vitamin A supplementation is approved by the government.	The MoHP has communicated to Plan Nepal that LIBON project districts will not be chosen as pilot districts for low-dose vitamin A supplementation for newborns. This suggestion is therefore no longer applicable.
Describe how operations research (OR) efforts will be coordinated with the government, USAID Mission, USAID/Washington, and contractors. <u>Please submit OR plans by second annual report.</u>	The LIBON plan for identifying an OR topic and carrying out OR is described in Section 3i as well as represented in the LIBON workplan.
Describe how project information will be shared with the USAID Mission and how it will contribute to their output (OP) indicators.	A reporting plan has been developed and incorporated into Section 3. Please see Table 10, page 66 for the reporting matrix that will be submitted to USAID/Nepal on an annual basis.

Describe how Plan will coordinate with CARE to publish and disseminate the national neonatal health newsletter.	Plan and CARE have agreed to coordinate to publish a semi-annual newsletter, as described in Section 2d, Result 4 as well as represented in the LIBON workplan.
Please ensure that the Memorandum of Understanding (MOU) is signed by the Ministry of Health and Population.	Please see Annex 9 for signed MOU.
Clarify how the project will work with the District Development Committee (DDC) and Village Development Committee (VDC).	Engagement with DDC and VDC is clearly described in Section 2e, Partner Roles.
Correct grammar and inconsistencies in the DIP document.	These issues have been addressed in the current document.
Revisions based on changes on the ground in Nepal	
Rapid health facility assessment (RHFA) has been eliminated from the M&E design in consideration of the project budget constraints and the limited added value of the RHFA for project monitoring.	
Newborn vitamin A supplementation has been eliminated as a component of the project due to the fact that the Government of Nepal (GoN) has chosen different districts in which to pilot this intervention.	
The chlorhexidine (CHX) component is not approved by the GoN for inclusion in the national CB-NCP, and pilot districts for the intervention remain uncertain. We address this in the DIP by stating that CHX may not be included as a component of LIBON.	
A second, expanded budget is presented in this DIP to demonstrate the financial shortfall that the project foresees based on the altered currency exchange rate as well as the increased cost of the CB-NCP. The first budget shows what Plan/LIBON can do based on the approved plans and budget, whereas the second budget shows an estimate of the funding needed to implement the CB-NCP as currently envisioned by the GoN.	

D. BUDGET

The total approved budget for Plan's four-year standard category child survival project is $2,054,631, with USAID contributing $1,494,337 and Plan contributing $560,294. **Attachment B** provides the detailed budget and budget narrative based on the approved budget total, as well as a second, expanded budget showing the estimated additional resources that may be needed to roll out the CB-NCP in its current state with an ever-weakening US dollar.

The second budget reflects the fact that the approved budget is no longer sufficient to achieve the deliverables of the project as a result of three main issues.

1. Significant devaluation of the dollar has affected the budget.
2. The GoN-endorsed package of services that the LIBON project aims to deliver has undergone significant changes which include incorporation of elements that result in the need for significant additional supplies and resources.
3. The GoN per diem has increased dramatically since the initial budget was created. The estimated budgetary gap over the 4-year project period is $821,477.00.

E. DETAILED IMPLEMENTATION PLAN

1. Program Site Information

a. Location of LIBON field sites[2]

LIBON is operating in the districts of Sunsari, Parsa and Bara in the Eastern and Central Terai areas of Nepal. These districts have a total of 1.9 million inhabitants, 7.34 percent of the country's population. 1,003,056 (51 percent) are male and 963,721 (49 percent) are female. In the three districts there are 52,214 infants aged 0-11 months; 54,519 children aged 12 – 23 months; 161,609 children aged 24-59 months and 374,819 women of reproductive age. This results in a total beneficiary population of 643,161 individuals.[3]

- **Intervention areas:** Maternal Neonatal Care (MNC) (100%)

Table 1. Direct Beneficiary Population Numbers for LIBON Project: 643,161

Direct Beneficiary Population	Number
Infants: 0-11 months	52,214
Children: 12-23 months	54,519
Children: 24-59 months	161,609
Children: 0-59 months	268,342
Women: 15-49 years	374,819
Total Population	**1,873,676**

[2] Please see **Annex 4** for detailed maps of project areas.
[3] GoN: Central Bureau of Statistics. 2002. *Population Census 2001: National Report*. Kathmandu, HMG/Nepal: National Planning Commission.

Table 2. Disaggregated Data of Project Districts by Sex

District	Male	Female	Total
Sunsari	350,476	346,082	696,558
Parsa	289,128	264,552	553,680
Bara	321,985	301,453	623,438
Total	**961,589**	**912,087**	**1,873,676**

Note: Year 2006 projected population based on Nepal 2001 Census.[4]

The charts in **Attachment A** include a description of these three districts in more detail including population size and composition, socioeconomic characteristics, practice of key neonatal health behaviors and availability of community and MoHP services. **Annex 4** contains maps at scale of the three districts, showing their location and their health service facilities.

Plan chose these field sites with the intention that each district would play a distinct role in LIBON's field program. Bara, the site of Plan's successful CS XVII project, will serve as a training and learning center for the project's participants in Sunsari and Parsa. With a small percent of project resources allocated to Bara to maintain the health gains of the CS XVII project, Bara will also serve as the sustainability laboratory for activities that are being expanded into the other two districts. Sunsari will be the focus of LIBON's program activities for the lifetime of the project, while Parsa will be the replication site for LIBON activities and will begin project operations during the second year of project implementation. Because the LIBON project focuses on program innovation (provision of an integrated package of neonatal care services, community mobilization, social inclusion and fact-based local planning, monitoring and decision making), this region was chosen as the project site due to its accessibility to the rest of the country which allows project staff to better monitor the field application of these innovations. Both Sunsari and Parsa are relatively accessible from Kathmandu and other areas of Nepal making LIBON an accessible learning and sharing site for other stakeholders interested to learn about the CB-NCP, including those preparing to roll it out. These districts are also sites of Plan Nepal's ongoing health, education, child rights and water and sanitation programs, thus making LIBON operations more efficient. Plan currently has fully functional infrastructure (office, vehicles and communications) and full-time administrative and technical staff operating in Sunsari, Parsa and Bara. Plan has established District LIBON offices at the DHO in Parsa and Sunsari and will be expanding its operations to the *Ilaka* (sub-district) level. Parsa borders Bara, where Plan's Program Management Unit is located. The geographic proximity will facilitate learning and exchange visits, and project management and oversight. The Sunsari district borders Morang where the Nepal Family Health Program (NFHP), a USAID bilateral program, and the Morang Innovative Neonatal Intervention (MINI), a model pilot program that will be scaled out through LIBON, have a presence. Both groups are available to provide technical support to LIBON, and collaboration and sharing will be facilitated by their geographic proximity. Plan has ongoing working relationships with the major district and regional stakeholders, including government agencies, local NGOs and CBOs.

[4] Ibid.

A significant percent of Nepal's population lives in these areas and under-five, infant and neonatal mortality rates are higher than the national averages. One reason for these higher than average indicators is that a significant percent of marginalized populations live in these districts.

b. Health status of the populations of the LIBON districts

Nepal's under-five, infant and neonatal mortality rates are 61, 48 and 33 per 1000 live births, respectively.[5] Compared with similar figures obtained in the 2001 Demographic and Health Survey (DHS) (91, 64, and 39 per 1000 live births, respectively), it is clear that a large decrease in mortality has been achieved in the post-infant period, followed by the post-neonatal period.[6] Neonatal mortality has only decreased from 39 to 33 deaths per 1000 live births in these five years however, and currently accounts for two-thirds of the infant mortality rate. A 2003 study on risk factors for early infant mortality in the Sarlahi District (Central Terai) found that the mortality in the first week of life was 28.6 per 1000 live births, and at 8-28 days it was 17.0 per 1000 live births.[7] Hospital-based and community-based data suggest that the major direct causes of neonatal death are infection, birth asphyxia, preterm birth and hypothermia.[8] The 2003 Sarlahi study also found that the life-saving effect of tetanus toxoid was significant and highest during 4-14 days following birth, suggesting that neonatal tetanus is still an important cause of mortality. The under-five, infant and neonatal mortality rates in the three districts targeted by LIBON are higher than the 2001 national averages.[9]

c.. Socio-economic and cultural characteristics of the LIBON population

Nepal is a landlocked country constrained by rugged terrain and limited resources with a population of 26.8 million belonging to more than 60 ethnic groups. The landscape tiers down from the Himalayas through middle hills to the plains, known as the Terai, in the south along the Indian border. The population is poor, and there is limited communication and infrastructure. The per capita income is about US$ 330, the human development index is 0.378, life expectancy is 58 years, adult literacy rates have a wide range (with large gaps between males and females), the total fertility rate is 4.8 in rural areas and early marriage and adolescent pregnancy are common. Currently 38% of the population lives on less than US$ 1 a day. It is estimated that the out-of-pocket expenditure for health care is 70-75% of the total health care expenditure.

Nepal's newborns live in communities with strong traditional culture, where the status of women is low and access to appropriate health services is limited. Traditional antenatal, delivery and postnatal practices persist, and acceptance of standard health system inputs has been slow. For example, menstruation, childbirth and the 10 days after childbirth are considered to be impure periods and during those times, women are separated from the family and are sometimes kept in unhygienic places, such as cow sheds.[10]

The three project districts have significant pockets of marginalized populations with less than average access and use of basic health services because of caste, ethnicity, practice of a specific

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[5] ORC Macro. 2007. *Nepal Demographic and Health Survey 2006*. Calverton, MD: ORC Macro.
[6] ORC Macro. 2002. *Nepal Demographic and Health Survey 2001*. Calverton, MD: ORC Macro.
[7] Katz J, West KP, Khatry SK, Christian P, LeClerq SC, Pradhan SK, Shrestha SR. 2003. "Risk factors for early infant mortality in Sarlahi district, Nepal." *BLT*. Geneva, Switzerland: WHO. 81: 717-725.
[8] GoN: MOHP. 2005. *Draft National Neonatal Long Term Plan (2005-2017).* Kathmandu, HMG/Nepal: MOHP.
[9] Please see **Annexes 5 and 6** for KPC baseline reports.
[10] WHO. 2003. Nepal Reproductive Health Report. Geneva, Switzerland: WHO.

religion or the existence of bonded labor practices. Approximately twenty-four percent of the Bara district is composed of marginalized populations. LIBON's strategy for social inclusion is described in further detail in Section 2.

d. Current status of health care services

The Government of Nepal (GoN) is committed to improving the health status of the people of Nepal through the provision of an equitable and quality health care delivery system. Towards this aim, and in line with the Poverty Reduction Strategy Paper and the Millennium Development Goals, the GoN has formulated its Health Sector Strategy, An Agenda for Reform 2003 (The Nepal Health Sector Programme – Implementation Plan (NHSP-IH)). The NHSP-IH includes safe motherhood and neonatal health as one of the key elements of the essential health care package.

Health care delivery is the responsibility of the Ministry of Health and Population, although NGOs are increasingly supporting government health services, both through the implementation of community-based programs and the management of health facilities.

The Divisions of Family Health and Child Health at the MoHP are responsible for organizing the national programs on Reproductive Health, Safe Motherhood and Integrated Management of Childhood Illness. Neonatal health is currently in the realm of both divisions. A multi-institutional Neonatal Sub-Committee (with its Technical Assistance Committee) has been created within the MoHP with shared leadership by both divisions. A National Neonatal Health Strategy was issued by the MoHP in 2004 which identifies evidence-based responses to neonatal health issues that will lead to reductions in neonatal mortality.[11] This strategy was issued with support from international agencies but until now its implementation has been limited. To reinforce this National Strategy, the MoHP, with technical assistance from Save the Children, prepared the draft of a National Neonatal Long Term Plan in 2005.

A potential but very relevant venue for mainstreaming neonatal health care within the MoHP is its incorporation in the Community-based Integrated Management Childhood Illness (CB-IMCI) program which is being overseen by the Division of Child Health. CB-IMCI is being implemented across the country (with different degrees of implementation progress) with financial and technical assistance from international cooperation agencies, including the World Bank (NHSP-IP), the World Health Organization (WHO), the United Nations Children's Fund (UNICEF) and USAID. Plan is currently supporting CB-IMCI in the three project districts. The GoN has made a commitment to sustain the CB-IMCI activities over time.

The Department of Health Services is responsible for running the network of MoHP facilities throughout the country. There are five levels of health care delivery in the country: Sub-Health Post and Health Post; Primary Health Care Center; District Hospital; Zonal, Sub-regional or Regional Hospital; and National Hospital. The Sub-Health Post (SHP), Health Post (HP) and Primary Health Center (PHC) are the primary health care units (PHCUs), while the hospitals are the referral units.[12]

[11] Ibid.
[12] Ibid.

The three LIBON districts house a total of three district hospitals and 233 primary health care units. The MoHP staffs these facilities with 775 personnel. **Attachment A** shows the distribution of the MoHP facilities and personnel in each district by VDC. These are summarized in Table 3 below:

Table 3: Summary Health Resources in Three Implementation Districts

District	# of VDCs	PHCs	SHPs	HPs	Doctor	Health Assistant	Staff Nurse	ANM	AHW	VHW	MCHW	Admin. Staff	Peon	Total
Sunsari	52	5	40	7	5	12	10	17	59	52	40	12	12	219
Parsa	83	3	75	5	3	8	6	11	88	83	75	8	8	290
Bara	98	3	84	11	3	14	6	17	109	98	84	14	14	359

MoHP guidance indicates that these facilities perform the following functions related to safe motherhood and newborn care[13]:

- At the **Sub-Health Post/Health Post** (usually staffed by a maternal and child health worker (MCHW) with 3 months of formal training after 10 years of education or an auxiliary nurse midwife (ANM) with 10 years of education, a School Leaving Certificate (SLC) from the SLC Board and 18 months of additional ANM training): antenatal and postnatal care, birth delivery (in selected posts), emergency obstetric first aid (antibiotic treatment, intravenous fluids), family planning, toxoid immunizations, newborn resuscitation (using an ambu bag) and parenteral administration of antibiotics to sick newborns.
- At the **Primary Health Center** (usually staffed by an ANM, an auxiliary health worker (AHW) and a health assistant (HA), all with more than 10 years of schooling plus 18 months training for ANM and 3 years training for HA): the above functions and Basic Obstetric Care (in selected facilities).
- At the **District Hospital** (usually staffed by medical doctors and registered nurses, plus support staff): the above functions, Comprehensive Obstetric Care and management of neonatal complications (hypoxia, hypothermia, sepsis).

In addition to services provided by health facilities, the GoN has supported the Female Community Health Volunteer (FCHV) program since 1988 in order to promote health through the interface of health facilities/staff and communities. There are currently over 50,000 FCHVs working in Nepal. In the rural areas in the Terai region, there is an average of one village-based FCHV per 706 people. While FCHVs are also present in municipalities, municipality-based FCHVs have not received the same level of training and supervision support as rural FCHVs overall. FCHVs' main activities include family planning (counseling and provision of pills and condoms), maternal and newborn health (pregnancy-related care, newborn care, vitamin A) and child health (nutrition, hygiene, treatment of pneumonia and diarrhea, vitamin A and deworming

[13] Ibid.

tablets, immunizations).[14] The GoN is currently designing an incentive strategy to recognize and reward FCHVs for the contribution they make to the health of the population.

Nepal obtained a low rating (35 out of 100) in the Maternal and Neonatal Program Effort Index developed by the USAID-funded Policy Project of The Futures Groups.[15] The best rated services (in decreasing frequency) were: breastfeeding information, clean cord cut, tetanus toxoid injection, warming, administration of iron/folate, mouth clearing and umbilical cord information. The worst services were: information on danger signs, emergency care, birth delivery with trained attendant, 48-hour checkup and eye prophylaxis. The Index also identified large service gaps between rural and urban areas; delivery care in urban areas was rated 48 while in rural areas was rated 13. Major obstacles for improving health care access and quality are unfilled posts, absenteeism, shortfalls in equipment and drugs, limited support to community-based staff and a lack of refresher training.

e. Household behaviors and care-seeking practices

As indicated in **Attachment A**, key neonatal care behaviors among the households in LIBON districts are limited and conducive to high neonatal mortality rates.

One key factor that underpins immediate strategies to address neonatal mortality is that nearly 80% of births are delivered at home with the help of family members or neighbors.[16] A cross-sectional, community-based study of care of newborn infants in Plan's Makawanpur district disclosed that 90% of women gave birth at home, either inside (80%) or in the courtyard (10%).[17] The most frequent birth attendants were the mother-in-law (40%), other family members (44%) or neighbors (30%). In 55% of cases, the birth attendants washed their hands before the procedure. Clean birth kits were used in only 8% of cases. The umbilical cord was cut with a razor blade in 56% of cases, although in only 33% could the razor be reliably described as clean. A household sickle was used in about one-third of births. Once the cord had been cut, the umbilical stump was usually left undressed (73%), and the most common application was oil. The time taken to wrap the baby was prolonged. Only 64% had been wrapped within half an hour, rising to 94% within an hour. Ninety-two percent of babies were bathed within one hour of birth, three quarters within the first half an hour. Breastfeeding was initiated within an hour of birth for 63% of cases and within six hours for 91%. These practices differed among ethnic groups. Women of the Tamang and Artisanal groups (lower caste and marginal groups) were more likely to give birth outdoors and cut the cord with a sickle and less likely to be attended by a skilled provider, whereas women of the Newar, Brahmin and Chetri groups (higher castes) were more likely to deliver at a hospital, be attended by a skilled provider and use clean birth delivery kits. They were also less likely to give birth alone.

The 2001 Demographic and Health Survey disclosed that the major barriers for rural women to access health care were (in order of decreasing frequency): money for treatment, not wanting to go alone, having to take transport, distance to health facility, concern there might not be a female provider, not knowing where to go for treatment and getting permission to go for treatment.

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[14] USAID & New ERA. 2007. *Community-Based Maternal and Neonatal Care*. Kathmandu, Nepal: USAID.
[15] Policy Project. 2001. *MNPI: Maternal and Neonatal Program Effort Index.* Durham, NC: Constella Group.
[16] National Neonatal Long Term Plan (2005-2017), MOHPMOHPMOHPMOHP, 2005.
[17] Osrin et al. 2002 British Medical Journal, Vol 325, 9 November 2002.

Underlying these reasons is the limited power that women have to decide to seek health care. According to the 2001 DHS, only 27% of women in the three LIBON districts could decide by themselves (or jointly) to seek such care. Therefore, the low status of women, poverty, and the caste system prohibit women from obtaining maternal and neonatal services. In most societies within the country there is little or no encouragement for women who have a pregnancy complication to seek appropriate care. Furthermore, women, as well as the family members, are often not aware of the life-threatening danger signs of pregnancy or birth-related complications, either in the mother or the newborn infant.

f. Status of baseline assessments

Baseline Knowledge, Practice and Coverage surveys were carried out using LQAS methodology in Sunsari and Parsa districts. Please see **Annex 6** for the baseline assessment report. Baseline data were not collected in Bara district since the project will use the final survey results from the CS XVII project as the baseline for Bara. Due to ongoing political instability, the Rapid Health Facility Assessment (RHFA) was only completed in Sunsari. Social and political unrest made it impossible to involve MoHP staff as needed to carry out the RHFA in Parsa. These complications and delays combined with budget constraints led the LIBON management team to assess the overall utility of the RHFA and come to the difficult decision to eliminate the RHFA from LIBON's M&E plan. RHFA data from Sunsari were shared with stakeholders and considered in the detailed implementation planning sessions for Sunsari, but in the future LIBON will collect only MoHP and KPC data for monitoring and evaluation purposes. Similar challenges to those described in regard to the RHFA, including limited availability and mobility of project and partner staff in the Terai, delayed CSSA training workshops in both Sunsari and Parsa. The Sunsari CSSA workshop was postponed until after the constitutional elections in April 2008. CSSA activities for Parsa were rescheduled to begin on July 28, 2008, when stakeholders would become actively involved in the planning of project activities for Year 2.

g. Using baseline data to inform program

Results from the baseline KPC survey show that some health indicators, such as TT immunization, are already higher than the project's targets. Discussions held during the DIP revealed that partners and stakeholders believe that the high coverage of TT shown at baseline is the result of spillover from ongoing projects in neighboring geographical areas. Other indicators, including knowledge of danger signs and practices related to neonatal care, are much lower. LIBON has adjusted the targets based on these findings and will focus on activity indicators that will have the most impact.

During the DIP planning meetings with stakeholders, baseline data was shared and discussed. DHO teams shared health services data tabulated by VDCs. The data revealed a disparity in services provided between large municipalities and rural communities. This data was reinforced by LIBON's baseline findings of low immunization rates in municipalities. Based on these findings, the project will modify its strategy to strengthen services first in the most marginal VDCs and municipalities.

h. Ongoing programs in LIBON districts

LIBON's closest multi-sector reference is Plan's health and development programs. Plan's programs are in eight Nepali districts (including those in LIBON) and involve an annual

investment of US$ 10 million in maternal and child health, water and sanitation, basic education and child rights. Process and impact indicators will be synergistic and complementary given that program implementation will involve the same district partners (District and Village Development Committees, local NGOs, government agencies, CBOs) as the LIBON CS project. Plan is in the process of replicating key aspects of the Bara Child Survival project in all of the other districts where it has long-term development programs in Nepal. Similarly, successful neonatal care activities from the LIBON project will be useful for future health programming in other country settings.

In addition to Plan's programs in the area, other major health programs involved in the provision of reproductive and neonatal health services in LIBON districts include:

The Community Drug Program (CDP) has been operational since 1995 and is supported by diverse international development agencies, including Plan. The CDP is a community-managed revolving drug fund that provides essential drugs to primary health care units and Female Community Health Volunteers. Plan's CS XVII Project in Bara district supported the CDP in its 98 Village Development Committees by training MoHP staff, community leaders and volunteers and by providing the VDC with start-up funds. At the time of the project's final evaluation, 94% of the VDCs and corresponding health facilities had established community drug programs and community drug management committees. The CDP had full coverage in Sunsari and Bara and partial coverage in Parsa leading up to the April 2008 elections. In anticipation of the April 2008 elections, however, the government decided to offer essential medicines and consults at health facilities free of charge. It is hoped that now that the elections have passed, the successful CDP program with its self-sustaining financial mechanisms will be fully reinstated.

The recently awarded USAID-funded Nepal Family Health Program II (NFHP) is being implemented by John Snow Research and Training Institute Inc. and its partners – Save the Children, EngenderHealth, JHPIEGO, World Education, Nepal Technical Assistance Group, Nepal Fertility Care Center, Management Support Services and the Nepal Red Cross Society. The goal of the project is to improve provision and use of public sector Family Planning/ Maternal, Neonatal and Child Health (FP/MNCH) and related social services supporting the Government of Nepal's intention to reduce fertility and mortality. Among NFHP's achievements are the assistance to the MoHP in the issuance of the National Neonatal Health Strategy, the development and implementation of community-based newborn health interventions in selected districts and the support to the Institute of Medicine of Tribhuvan University (also a LIBON project partner) to develop pre-service and in-service training curricula on neonatal care. NFHP II is actively involved in helping the government of Nepal implement its Community-based Newborn Care Package, which comprises the major focus of LIBON's program activities. Also as a USAID project, NFHP is actively involved in coordinating the neonatal care activities being conducted by USAID-funded agencies. NFHP has a strong focus on field support and will support Maternal Neonatal Care (MNC) efforts in the central Terai and Midwest regions of Nepal. NFHP will therefore support the LIBON project in its adaptation of the MINI field trial within LIBON's newborn package, particularly in Sunsari. In addition, as per the MOU signed between Plan Nepal and NFHP, NFHP will collaborate with LIBON on its anticipated operations research activity.

The Nepal Health Sector Program – Implementation Plan (NHSP-IP), funded by the World Bank and active in the MoHP since 2005, is of national scope. Among its development objectives is the reduction of maternal and newborn mortality through increased coverage of quality antenatal care, emergency obstetric care, skilled attendance at birth and newborn and postpartum care. LIBON has approached the Skilled Birth Attendance (SBA) focal person, Ms. Sita Gerung, in order to request that she give priority to Sunsari and Parsa in consideration of the fact that the LIBON project will implement a comprehensive package of services which includes referral to health facilities for SBA. LIBON will follow up with the FHD at the MoHP and the National Health Training Center to advocate the necessity and complementarity of having the SBA program in LIBON districts.

The LIBON project will maintain close coordination with the programs mentioned above so that current and future activities complement and synergize the common goal of reducing maternal, child and neonatal mortality in the three LIBON districts.

CARE is also starting a new child survival project in 2 districts of the Far West region of Nepal. The project is focusing on MNC as well as HIV/AIDS and CB-IMCI. Although operating in different regions, the two project management teams meet monthly and share experiences and tools, and project staff have begun to explore collaboration including organizing joint training events, publication of joint NNH-focused newsletters and coordination of monitoring strategies. The projects have also discussed working together with NFHP to aggregate and analyze community-level data on neonatal and maternal mortality from their respective districts. In addition, CARE has a polio eradication project operating in Parsa, a LIBON project district. Plan and CARE will collaborate on district planning activities in Parsa and may coordinate efforts with regard to some of the municipalities that have low indicators.

UNICEF is working in 16 VDCs and 3 municipalities in Sunsari, though it does not cover all wards in the municipalities. UNICEF has facilitators that work with mothers' groups to conduct growth monitoring and keep track of immunizations and nutritional status at monthly meetings. The LIBON project is discussing how it can support UNICEF to incorporate NNH services and messages (including vaccination services and breastfeeding education) into its municipal mothers' groups. This is an important potential collaboration considering the low immunization rates in municipalities that were revealed at baseline, and the high percentage of the population living in municipalities in the project districts.

i. USAID/Nepal involvement

USAID/Nepal is working closely with all United States Government (USG) funded health projects to ensure a coordinated strategy in support of the government's CB-NCP effort. The LIBON project will involve USAID/Nepal in critical moments of its implementation including the mid-term and final evaluations. USAID staff will be regularly invited to visit LIBON field sites. For example, USAID/Nepal will be invited to the annual reviews of LIBON's performance and to the district reviews of the Annual Operating Plans to Reduce Maternal, Child and Neonatal Mortality. In addition, Plan will participate with USAID in monthly partner meetings, and the LIBON Project Coordinator will meet quarterly with the staff at USAID/Nepal to discuss LIBON's progress and obtain their input. USAID/Nepal will provide input into the topic chosen for the LIBON operations research activity in Year 2. USAID/Nepal's Child Health Coordinator

has already participated in key LIBON start-up activities including baseline training events and district level coordination meetings.

LIBON annual reports and mid-term and final evaluations will be sent to USAID/GH/HIDN as well as USAID/Nepal and will include: indicators collected through LQAS and CSSA in each district, relevant OP indicators, recommendations made by the local stakeholders to improve their health situation and the results of the implementation of these recommendations. The LIBON project will report qualitatively on progress on policy level objectives (Result 4) and cross-cutting strategies (social inclusion) in narrative reports to USAID/GH/HIDN.

2. Program Description

a. Community-based neonatal care package

A major focus of the LIBON project is the implementation of the **CB-NCP,** which was developed by the GoN based on the national level commitment to meet Millennium Development Goal 4. The Rapid Assessment of Newborn Health in Nepal, Department of Health Services states, "Despite various community based packages focusing on specific issues/ interventions, no single integrated package currently exists for community based neonatal health programming." The report recommended the following: "Develop one integrated community based package for improving neonatal health – perhaps integrating it with existing SM [Safe Motherhood] and CB-IMCI packages." Based on this recommendation, the MoHP constituted a Technical Working Group to develop a Community-based Neonatal Care Package which would be tested and thereafter finalized for scale up in the country. The LIBON project will participate in the first phase of CB-NCP application by conducting the CB-NCP trainings and supporting implementation in Sunsari and Parsa districts.

The Community-based Neonatal Care Package is intended to be a flexible package, with new interventions being added as evidence-based experience evolves globally and in Nepal. In a context of high rates of home delivery without skilled assistance and poor access and utilization of facility-based services, particularly in rural areas, the CB-NCP builds on successful national level experience with community-based vitamin A supplementation and CB-IMCI services provided by FCHVs. The Female Community Health Volunteer is identified for providing CB-NCP services. The FCHVs, who are in continuous contact with the community and from the same ward, will be provided a performance-based financial incentive after providing three postnatal check-ups according to the required protocol. To encourage institutional delivery, the FCHV would be encouraged to advise/accompany the mother to the health facility for delivery and would receive her incentive at the completion of the postnatal care. The FCHVs will be supported by the peripheral health workers and health facilities.

Based on the selection criteria, the following seven components were identified for inclusion in the package[18]:

1. Behavior change communication
2. Promotion of institutional delivery and clean delivery practices in case of home deliveries
3. Postnatal care
4. Community case management of pneumonia/Possible Severe Bacterial Infection (PSBI)
5. Care of low birth weight (LBW) newborns (<2,500 grams)
6. Prevention and management of hypothermia
7. Recognition of asphyxia with initial stimulation and resuscitation of newborn baby

1. Behavior Change Communication:
Home-based, ward-based and facility-based BCC activities will be implemented through FCHVs, Skilled Birth Attendants (SBAs), other health facility staff and community leaders to be identified at the community level. The well-tested Birth Preparedness Package (BPP) will be adapted and modified for the CB-NCP. It will be used for interpersonal and group education through mothers' groups and one-on-one communication by FCHVs, SBAs and other health staff. Focused social and communication campaigns will be initiated in pilot districts, while mass media campaigns will be developed through the National Health Education and Information Communication Center (NHEICC) for nationwide awareness raising of key neonatal messages.

2. Promotion of institutional delivery and clean delivery practices in case of home deliveries:
SBAs, health facility staff and FCHVs will be encouraged to promote institutional deliveries, including the importance of clean delivery practice through awareness-creation messages in the BPP. Performance-based incentives will also be provided to FCHVs for accompanying the woman to a health facility for delivery. Where institutional deliveries are not undertaken by the family members, FCHVs will encourage the presence of a SBA at home delivery and will be provided performance-based incentives for attending those births to ensure conduct of clean deliveries by providing free Clean Delivery Kits (CDKs). Social marketing of Clean Delivery Kits will also be encouraged to ensure reach to those home deliveries not reached by FCHVs.

3. Postnatal Care:
SBAs and health facility staff will be encouraged to promote facility-based postnatal care of both the mother and her newborn. They will also be encouraged to provide home-based postnatal care. FCHVs will be trained to provide three postnatal visits at home for both the mother and her newborn, the first of which requires her presence at delivery. The performance-based incentive provided for attendance of home deliveries will only be issued on the completion of the required number of visits and care. This protocol is still under development and is yet to be finalized. Functional linkages between the FCHVs, health workers and health facilities will be established to ensure efficient referral.

[18] From the MoHP plan for roll out of the CB-NCP

4. Community case management of pneumonia/PSBI:
FCHVs will use algorithms to identify neonatal infections during postnatal visits or when called upon by the families. If they diagnose PSBI, they will initiate and provide 5 days of oral cotrimoxazole treatment and refer to a health facility staff for provision of a gentamicin injection as per protocol.

5. Care of low birth weight newborns (<2,500 grams):
FCHVs, SBAs and other health facility staff will be trained to weigh all newborns at birth to identify low birth weight babies using the color-coded Salter scale. LBW babies will be provided home-based or facility care, including Kangaroo Mother Care, feeding support, etc. For all LBW babies receiving care at home, the FCHVs will establish a functional linkage with health workers and health facilities for immediate referral of very low birth weight babies (<2,000 grams) and LBW infants with danger signs (no or difficult breathing, high or low axillary temperature).

6. Prevention and management of hypothermia:
SBAs, health facility staff, FCHVs and families will be made aware of the importance and prevention of hypothermia in newborns through the Birth Preparedness Plan. Peripheral health facility staff and mothers will be trained to manage hypothermia in newborns, and to refer to appropriate health facility if needed.

7. Recognition of asphyxia with initial stimulation and resuscitation of newborn baby:
SBAs and health facility staff will be trained in recognizing and managing birth asphyxia. For home deliveries, FCHVs will also be trained to recognize and immediately manage birth asphyxia as per guidelines.

b. Experience plus innovation to achieve results
In Sunsari and Parsa, the LIBON project will implement the GoN CB-NCP as outlined above. The project will draw on Plan's experience of implementing many of the same components in its previous CS XVII project in the Bara District which included:

- Skilled birth delivery.
- Promotion of the practice of hand washing by the Skilled Birth Attendant immediately before the procedure with use of Clean Birth Kits.
- Promotion of immediate contact of newborn with mother for warmth and immediate breastfeeding.
- Promotion of immediate drying of the newborn's skin after birth and postponement of newborn bathing for 24 hours after birth.
- Completion of four prenatal care visits by skilled personnel (at least MCHW).
- Administration of post-partum vitamin A.
- Increase of caretakers' and mothers' recognition of newborn danger signs.
- Supporting immediate referral of newborns with danger signs to the nearest skilled provider (e.g., FCHV, MCHW).

As demonstrated by its final evaluation, Plan's CS XVII project was able to achieve significant improvement through implementation of these interventions, achieving and surpassing its

original objectives. A second group of technical interventions to be included in the package of interventions is part of the new MoHP policies and regulations:[19]

- Promotion of tetanus toxoid immunization during pregnancy.
- Administration of iron supplements during pregnancy (at least 120 days).
- Administration of a single dose of the deworming medication albendazole after the fourth month of pregnancy.
- Administration of a low dose of vitamin A (25,000 IU) to pregnant women suffering night blindness (after the first trimester).
- In LBW babies, promotion of skin-to-skin contact (Kangaroo Care) and immediate and exclusive breastfeeding.
- Check-up home visits to the newborn by an MCHW or FCHV within the first 3 days after birth and subsequently within the first week after birth.

Based on the Disease Control Priorities study (II edition),[20] the above two groups of mostly preventive interventions could decrease the neonatal mortality rate by 10 to 40 percent.[21]

- A third group of technical interventions includes the methods and tools developed in the MINI and chlorhexidine field trials (explained in further detail below) to prevent and treat neonatal infections using a community-based approach. The LIBON project intends to use the materials and methods from both field trials, including those related to community health education and training and supervision of FCHV and peripheral MoHP staff. The interventions will involve the use of **chlorhexidine** for topical application on the umbilical stump (**if approved by the MoHP for piloting in LIBON districts**), and antibiotics to be administered for PSBI (oral cotrimoxazole immediately after presumptive diagnosis by FCHV followed by patient referral and gentamicin parenterally injected by a MoHP worker[22]).

The chlorhexidine field trial[23] was implemented in the Sarlahi district of Nepal (in the Terai and close to Bara and Parsa) from 2002 to 2005 by Johns Hopkins University (JHU), Nepal Nutrition Intervention Project, and the IOM. The goal of the field trial was to test the efficacy of the topical application of chlorhexidine 4% solution to the umbilical stump during the neonatal period. The cord was cleaned at home by a trained project worker four times during the first 10 days after birth. A total of 15,000 newborns participated in the study, of which 5,000 received chlorhexidine (the others were offered dry cord care or washing it with soap and water). The status of participants was recorded at the end of the 28 days after birth. In those who received chlorhexidine, the incidence of omphalitis, a major cause of neonatal infection, was reduced by 75%, as compared with the other groups. Neonatal mortality was also reduced by 25%. Mortality

[19] GoN: MOHP. 2006. Annual Report of Health Services. Kathmandu, Nepal: MoHP.
[20] Dean T. Jamison et al, Disease Control Priorities in Developing Countries, Second Edition. Washington, DC: The World Bank, 2006.
[21] Neonatal Survival in Disease Control Priorities (II edition), 2006.
[22] Given that most of the neonatal infections detected during MINI field trial happened during the first week of life, an only-oral antibiotic treatment is not recommended by WHO (2002). The challenge of diagnosis and treating neonatal infections is to identify the service delivery strategy that will assure the prompt administration of parenteral antibiotics to the suspected patients.
[23] This trial was reported in: Mullany L, et al. 2006. "Topical applications of chlorhexidine to the umbilical cord for prevention of omphalitis and neonatal mortality in southern Nepal: a community-based, cluster-randomized trial" *Lancet*: vol. 367, pp. 910-918.

reduction was most intense if the umbilical stump was cleaned with chlorhexidine within 24 hours of birth. The chlorhexidine field trial showed that the topical application of chlorhexidine had a superior protective effect (against omphalitis and neonatal death) than dry cord care or washing the stump with soap and water. This intervention is not currently included in the CB-NCP.

The MINI field trial was implemented in the Morang district of Nepal (a Terai district bordering Sunsari) from 2004 to 2006 by John Snow International (JSI) and funded by the Save the Children Saving Newborn Lives Initiative. The goal of the field trial was to test the feasibility and quality of care of a community-based approach for early diagnosis and treatment of *possible severe bacterial infections* among neonates. The study protocol included scheduled visits to newborns early after birth by FCHVs. If a newborn had signs indicative of PSBI, the FCHV provided him/her with an oral dose of cotrimoxazole and referred him/her to the nearest MoHP facility. There, the health worker continued treatment with oral cotrimoxazole but also began parenteral gentamicin. A total of 6,000 live births participated in the MINI field trial, and 1,022 cases of PSBI were reported among them during the first two months of life. Most cases and deaths were concentrated in the first 2-4 days of life. Sixty-eight percent of PSBI cases were first seen by a FCHV and the rest by MoHP staff. MINI was successful in facilitating early diagnosis: 65% of cases seen by FCHVs were within 48 hours of onset. Home was the initial setting for treatment in 78% of cases. Ninety percent of the PSBIs were treated with gentamicin by the MoHP staff. Eighty-five percent of neonates with PSBI completed the 5-day cotrimoxazole treatment, and 80% of neonates with PSBI completed the gentamicin treatment. MINI was also successful at ensuring early treatment: 46% of the cases were first seen by an FCHV and received gentamicin within 48 hours of onset. Utilization and success rates were similar across ethnic groups. The MINI field trial showed that it was feasible and effective to treat neonatal infections with antibiotics and within a community setting. For the adaptation of MINI, Plan will work closely with NFHP and the DHO in Morang. A group of LIBON staff has already conducted a learning visit to the MINI field site and plans for further collaboration and sharing are underway. This intervention is currently included in the CB-NCP.

Both chlorhexidine and the MINI field trials were successful, but they focused on one intervention each. LIBON intends to include both interventions within its comprehensive newborn care package. Both field trials are statistically significant in that chlorhexidine application serves as a primary prevention intervention while the MINI interventions serve as a treatment alternative. However, the chlorhexidine methodology is not approved for inclusion in the CB-NCP. USAID is working with Plan Nepal to request approval for chlorhexidine use in the LIBON project. If approved by the MoHP for LIBON to incorporate chlorhexidine into the newborn health package, the project will emphasize the importance of early topical application of chlorhexidine. It will also work with the NFHP to incorporate measures to treat PSBI. If approved, the protocols for preventing, diagnosing, and treating neonatal infections will be incorporated into the training sessions with routine supervision of the FCHV as part of the CB-NCP.

c. Goal, results and strategies

The LIBON Project goal is: To Sustainably Reduce the Burden of Neonatal Mortality in Nepal. This goal will be achieved through the implementation of the following results:

Result 1: Increased Access to NNH Services in Sunsari and Parsa
Result 2: Increased Demand for NNH Services in Sunsari and Parsa
Result 3: Increased Quality of NNH Services in Sunsari and Parsa
Result 4: Strengthened support for NNM reduction in Nepal

The following strategies inform the LIBON program design:

- Community-based Service Delivery
- Community Mobilization
- Health Systems Strengthening
- Stakeholder Sharing and Collaboration
- Social Inclusion

Community-based Service Delivery to increase ACCESS

CB-NCP components will increase demand for and access to services at the community level and include: Behavior change communication including the Birth Preparedness Package (BPP); Mass media and social mobilization; Promotion of institutional delivery and hygienic delivery practices; Postnatal home visits; Community-based management of neonatal possible severe bacterial infection; Community screening for low birth weight; Hypothermia prevention; and Neonatal asphyxia. **Pending MoHP approval,** LIBON will incorporate innovative interventions that have been successfully piloted in Nepal including two strategies for detecting and treating neonatal infection: Community-based application of chlorhexidine to the umbilical stump to prevent neonatal infection; and early diagnosis and treatment of *possibly severe bacterial infections* among neonates by FCHVs.

Community Mobilization to increase DEMAND

FCHVs and other providers will be trained to facilitate and educate women through Pregnant Women's Groups. The CS XVII-tested, community-based pregnant women's groups[24] will be the major platform for LIBON's community health education, while FCHVs will be the main cadre of health workers involved in LIBON project implementation. LIBON's social mobilization through FCHVs and PWGs will increase demand for and access to health services. LIBON will support the formation and facilitation of PWGs throughout the three districts based on the success of this strategy in Plan's previous child survival project. As LIBON's platform for community health education, PWGs will be facilitated by GoN-sanctioned FCHVs trained in both facilitation and technical subject matter and linked to MoHP health facility staff that support FCHVs and PWGs through outreach and supervision. PWGs will be formed simultaneously in two to three VDCs. The process begins by introducing the strategy at the DHO level. All

[24] For more details about the PWGs see information in this section or the special study in the annex of CS XVII final evaluation. In sum, during the 2nd year of that project it was found during routine monitoring that there was very low coverage of MNC services (TT, antenatal care visits, etc.). To reach these mothers, a sub-group of the mothers group was piloted among a few VDCs – the PWG – and found to be an effective strategy for reaching most of the pregnant mothers. It was subsequently scaled up to the whole district.

stakeholders are included in a 2-hour training event at the VDC level, after which FCHVs, MCHWs and CHWs receive an additional 2-day training in PWG formation and facilitation from the local health facility and LIBON trainers. PWGs are designed to: 1) empower female community health volunteers, traditional birth attendants and mothers by enhancing their ability to organize themselves in groups, 2) promote discussion on health issues, 3) improve access to health services and 4) improve the health status of women of reproductive age and their children. PWGs meet once a month and consist of 8-12 pregnant women and mothers of under-five children. In addition to PWGs, LIBON will develop and broadcast FM radio messages on NNH as well as BCC and IEC activities (street theater and model demonstrations) that are part of the CB-NCP (see section on CB-NCP below).

Health Systems Strengthening to increase QUALITY

Through training provided by the Institute of Medicine of Tribhuvan University, LIBON will build capacity at all levels of the MoHP in monitoring and evaluation methodologies, data analysis, and fact-based decision making. It is anticipated that the IOM will incorporate these monitoring and evaluation methodologies into coursework at Tribhuvan University in order to ensure sustainability and scale up. LIBON will encourage participants to utilize data for planning and decision making, including for the development of District Strategic Plans for Maternal, Child and Neonatal Health, and Annual Operational Plans for Maternal, Child and Neonatal Health. Local level activities for use of data to improve quality are also planned. For example, Plan will support data use for decision making through regular meetings at health post and sub-health post levels. Prior to these meetings, FCHVs will meet with mothers' groups in their respective communities and compile local health data. This information will be presented at the sub-district meeting along with data from the other area communities. All statistics in accord with MoHP reporting categories will be recorded on a white board which is displayed at the sub-district office. In the CS XVII project, this activity served as an inspiration for all the health workers. When interviewed, the health workers and health management committee members discussed how they had not understood the importance of the data before this recording activity, but afterwards they had a better grasp of the importance of their work. According to the In-Charges, these regular meetings greatly contributed to a sense of ownership by local health workers.

Stakeholder Sharing and Collaboration to increase SUPPORT

LIBON will promote national collaboration for decentralized action to increase access to and quality of maternal and neonatal health services. LIBON will support the Government of Nepal MoHP's recently endorsed Community-based Newborn Care Package. The Child Health Division and the Family Health Division of the MoHP will lead and facilitate the intense coordination of activities to achieve national scale and maintain high technical standards. Plan LIBON staff will participate in national technical subcommittees in order to guide the development and implementation of the CB-NCP. In LIBON districts, Plan will work with the district MoHP offices to secure participation of key local actors including District Development Committees, Village Development Committees and local NGOs. LIBON will support these important local partners to participate in the detailed planning, implementation and monitoring of the CB-NCP. Plan will coordinate with the USAID-funded CARE CS project to identify means by which the projects can analyze activities and results across projects (both implementing CB-NCP) and coordinate to share the learning across projects and with national level stakeholders.

Social Inclusion to increase EQUITY

LIBON aims to ensure that project activities reach even the most disadvantaged groups (DAG). Disadvantaged groups, for LIBON purposes, are defined within regions and districts based on a newly developed GoN coding system which is intended to allow for greater tracking and monitoring of equity.[25] As this new coding system is incorporated into MoHP recording and reporting forms, LIBON will look for ways to support the process for collecting and utilizing the coding data in a way that is both sustainable within the health system, and useful for project monitoring. In Sunsari, LIBON worked with the DHO to analyze census data of Nepal's 57 ethnic groups to identify the VDCs and wards with the greatest percentage of DAG in which to begin community mobilization and education in PWGs. Plan has approached CARE Nepal about the possibility of working together to jointly develop and apply a monitoring strategy for social inclusion across their simultaneous USAID-funded projects, and Plan/LIBON will continue to work toward this end.

In addition to applying the GoN definition of DAG and developing the means by which to utilize this data for tracking of social inclusion within the project, LIBON will make efforts to empower women/mothers through its project activities. PWGs are a strategy for empowering FCHVs and its female members through education and skills building. LIBON will begin PWG activities in the most marginalized communities in the intervention districts At the community level, PWG members will develop community maps for both health behavior mapping and social inclusion purposes. PWG members will use the maps to identify any women not in attendance and encourage them to participate in order to increase social inclusion. The Bara experience of forming PWGs was created when routine monitoring of maternal health services revealed low coverage particularly among women of low caste groups. In order to reach these populations, the project will initially focus its training program and formation of PWGs in the most marginal and poorly accessed VDCs in order to reach the underserved and achieve the most impact. Additionally, because the project is focusing on strengthening the role of FCHVs, they correspondingly strengthen the role of women in community leadership and health care.

At the VDC level, LIBON staff will encourage health facility management committees (HFMC) to include a member representative from a local woman's group, an FCHV, and a member of a disadvantaged group to work with LIBON project staff for decision making within the health facility committee. At the district level, LIBON will strengthen the capacity of DDCs and district Reproductive Health Coordination Committees (RHCC) to include representatives of marginalized groups in their deliberations.

The LQAS methodology utilized by LIBON allows for data analysis by Supervision Area in order to focus on specific needs in the target groups. LIBON will encourage MoHP staff to consider these needs and respond with effective interventions. LIBON will strengthen the capacity of DDCs and district Reproductive Health Committees (RHC) to apply the results of annual LQAS and CSSA in the planning, monitoring and resource allocation of their local health programs in order to ensure equitable programming. In addition, LIBON will facilitate the participatory design and implementation of annual operational plans to improve the child, maternal and neonatal health situation in the district.

[25] See **Annex 7** for Nepal's caste and ethnic groupings.

d. Activities by result

LIBON Project results will be achieved through a combination of community-based service delivery (training and support for the CB-NCP described above), community mobilization through Pregnant Women's Groups (PWGs), mass media, capacity building through training and supportive supervision, technical networking and sharing and collaboration with stakeholders. Please see the Results Framework describing the objectives of LIBON in **Diagram 1**.

Bara District. The project aims to sustain the advances made in the previous CS project. This will be accomplished, as recommended in the final evaluation, through a continuation of some of the previous project activities. In Bara, LIBON will work with the DHO to provide technical and financial support for:

- Health Facility Management Committee meetings
- Monthly supervision meetings at sub-health posts with FCHVs
- *Ilaka* review meetings (Health Management Information System (HMIS) reporting)
- District review meetings (data review and planning)
- RHCC meetings
- VDC planning efforts to sustain the PWG and monthly meetings (*Ilaka* as well as sub-health posts
- Follow-up for PWG
- National health program activities/campaigns

Plan Nepal's core program will provide complementary support to Bara DHO and *Ilakas* to include support for the district level CB-IMCI review and core activities such as social mobilization, HIV/AIDS, disability, school health program and child club support.

LIBON is currently revitalizing PWGs in Bara due to a six-month period of social and political unrest that caused the suspension of community and facility activities. Of the 415 PWGs that were active in Bara, LIBON will identify and restore those that have stopped meeting. An expert consultant with previous experience working with PWGs will be hired to work with health facilities and MCHWs, CHWs and FCHVs to regenerate skills and support for PWGs at each level.

In addition to maintaining the advances achieved in Bara during the previous project, Bara will serve as a learning site for LIBON. Project staff that will work in Parsa will first spend six months working in Bara to learn about PWGs and other activities to be replicated through LIBON before implementing these activities in Parsa. The LIBON Sunsari team visited Bara to learn about PWGs before beginning their PWG formation activities.

Diagram 1. LIBON Results Framework

Goal: To Sustainably Reduce Neonatal Mortality in Nepal

Result 1:
Increased Access to NNH Services in Sunsari and Parsa

1.IR1: Community outreach mechanisms expanded and strengthened

1.IR2: Marginalized groups access services in equal proportion to non-marginalized groups

1.IR1 Activities:
- Provision of CB-NCP training for FCHV and MoHP staff
- Formation of PWGs

1.IR2 Activities:
- PWG behavior mapping of participation

Result 2:
Increased Demand for NNH Services in Sunsari

2.IR1: Mothers recognize risks associated with pregnancy, delivery, and neonatal period **and are able to take appropriate action**.

2.IR1 Activities:
- Community-Based health education in PWGs
- IEC through mass media

Result 3:
Increased Quality of NNH Services in Sunsari and Parsa

3.IR1: NNH monitoring and planning systems strengthened

3.IR1 Activities:
- Provision of CB-NCP training from national to community levels
- Incorporation of CB monitoring systems
- Training and support for the application of LQAS/KPC
- Application of data review and utilization strategies during MoHP review and planning meetings

Result 4:
Strengthened support for NNM reduction in Nepal

4.IR1: Data generated and utilized to inform national level policy

4.IR1 Activities:
- Publication and distribution of semi annual project newsletter
- LIBON Steering Committee regularly reviews project progress and findings
- Conduct and disseminate findings from operations research study
- Student research and sharing on NNH topics

LIBON will attain results in **Sunsari and Parsa Districts** through the actions outlined here.

Result 1: Increased Access to NNH Services in Sunsari and Parsa

Train health service providers
LIBON will train health care providers from national to community level. The largest group of health workers to be trained is the Female Community Health Volunteers group (a total of 2,966 in the three districts). FCHVs provide educational and promotional services, treat common ailments and distribute basic drugs and supplies. FCHVs will distribute certain drugs free of charge (e.g., ORS, contraceptives, cotrimoxazole) while others are part of the CDP and paid for by clients.[26] FCHVs are responsible for organizing and facilitating the PWGs. MCHWs and CHWs will also be trained and will link with FCHVs to provide outreach services during PWG meetings.

Formation of pregnant women's groups
PWGs will be formed in every ward in the two new districts, and the project will provide ongoing support to the 415 PWGs in Bara. In addition to providing a platform for BCC/IEC and service delivery activities, PWGs will identify and report on individual health behaviors and outcomes. The PWG process involves community mapping as a way to identify women who may not be benefiting from the group, and promotes the development of strategies to encourage their inclusion and therefore their access to available health services through the PWGs.

Strengthen referral system
CB-NCP training and community mobilization activities will work together to strengthen the MoHP referral system. This will be accomplished through training MoHP staff at health facilities, outreach workers, and FCHVs in the referral protocol. LIBON will support and strengthen that protocol through community mobilization that strengthens both community-facility linkages and social support for care seeking. A pilot emergency referral and transportation system will be undertaken in one *Ilaka* and, if successful, scaled up within the LIBON project districts.

Result 2: Increased Demand for NNH Services in Sunsari and Parsa

CB-NCP BCC component
LIBON will support the CB-NCP's home-based, ward-based and facility-based BCC activities through FCHVs, Skilled Birth Attendants, health facility staff and community leaders. A Birth Preparedness Package will be adapted and modified for the CB-NCP. It will be used for interpersonal and group education through mothers' groups and one-on-one communication by FCHVs, SBAs and other health staff. A focused social and communication campaign will be initiated in pilot districts, while a mass media campaign will be developed through the National Health Education and Information Communication Center for nationwide awareness raising of key neonatal messages as part of the CB-NCP.

[26] Until recently the CDP had been functioning effectively in the project districts. However, just before the DIP in anticipation of upcoming elections, the government suspended all charges for medications and services. It is anticipated that the CDP will be reinstated soon after the April elections.

IEC through PWGs

Pregnant Women Groups will provide a supportive environment for health education messages. As the primary education and outreach strategy of the LIBON project, PWGs are the community building blocks of LIBON. PWGs provide a venue for FCHVs to advise, encourage and educate women with regard to key newborn health practices, a social support system for women seeking information or services and serve as a point of contact with MoHP staff. PWGs will encourage a buddy system for new mothers-to-be to buddy with a peer from her community who has demonstrated positive health and care seeking practices. Through PWGs at the community level, LIBON will encourage women to generate, analyze and discuss information with regard to health care practices and services in their community.

Mass media efforts

Based on the successful use of FM radio programming to increase demand for services in the Bara district during the previous project, LIBON will adapt and disseminate messages through FM radio in Sunsari and Parsa. In Bara, the messages focused on antenatal care (ANC) and delivery care in addition to other health messages. Beginning in Year 2, LIBON will develop and air radio messages in local languages that are tailored to the most current and relevant NNH issues.

Result 3: Increased Quality of NNH Services in Sunsari and Parsa

Train health service providers

Training of health care providers will both increase access to services (Result 1) by increasing the number of trained providers and community outreach activities, and increase the quality of services through building skills and providing access to materials and supplies that will facilitate a higher quality of service provision among the cadre of health workers trained, including FCHVs and health facility staff. FCHV will provide education and information in regard to ANC, delivery care and postnatal care (PNC), as well as distribute certain drugs. FCHVs are responsible for organizing and facilitating the PWGs and also serve as liaisons with services provided by MCHWs and CHWs, who link with FCHVs to provide outreach services during PWG meetings.

Strengthen capacity for data use for decision making

LIBON will facilitate project stakeholders' use of LQAS and CSSA and will ensure participatory analysis and interpretation of results in planning and monitoring activities. LIBON will facilitate the participation of project stakeholders in LQAS data collection, data analysis and information dissemination in order to ensure hands-on learning and data use for decision making. Project-supported annual review meetings at the district level will provide an opportunity for project stakeholders to utilize project data for decision making for maternal, child and neonatal programs. LIBON will facilitate date use in the development of strategic plans and annual operating plans. Review meetings with district level participation will be held regularly at PHC and health post levels to provide an opportunity for sharing and decision making. At health facility level meetings, participants will partner during each meeting to provide peer reviews of the quality of data collected from another facility, and work together with their partner to identify solution to any data quality issue identified, as well as discuss ways to strengthen the programs that influence the data. In addition to the inherent value of broad and active participation in these

processes, high level stakeholder engagement, capacity building and ownership of the systems together with technical assistance provided by LIBON is also a strategy for sustainability of the use of the participatory monitoring approach, tools and methodologies**.** LIBON will provide technical and material assistance to build the capacity of MoH and IOM to conduct high-quality LQAS, and/or CSSA training for government and private providers nationwide.

Result 4: Strengthened support for NNM reduction in Nepal

Share LIBON NNH updates through semi-annual newsletter
LIBON staff will document and disseminate relevant project results and experiences in a semi-annual newsletter which will be jointly published with CARE Nepal. Each semi-annual issue of the NNH newsletter series will present and discuss one significant topic for the provision of neonatal health in the country using experiences developed in Nepal. Each issue will be widely distributed. Possible topics include: assessment of the effectiveness of community-based neonatal care programs; diagnosis and treatment of neonatal infections at the community level; pregnant women's groups as vehicles for empowerment and improving neonatal survival; and health information systems from the family and the community to the MoHP. Each issue will also contain the feedback and guidance of international and national experts. Plan will work together with the CARE Nepal CS project team to jointly publish this newsletter, and the two project management teams will work together to decide on the topics to be included in the series and their technical content.

Coordinate and collaborate with stakeholders
LIBON will collaborate with the MoHP, the international community and the IOM to strengthen the knowledge base on neonatal health programming in the country. Plan will collaborate with the MoHP Division of Child Health to adapt LIBON's neonatal care package (including the case management of neonatal infections when approved by the MoHP) within the existing Community-based IMCI Strategy nationwide. Key venues for the LIBON project to participate in policy dialogue will be the Central MoHP, the IOM, the National Neonatal Sub-Committee of the MoHP and LIBON's Steering Committee. The latter, an advisory structure for the project, is comprised of the National Directors of Family Health and Child Health, the Dean of the Institute of Medicine and Plan's Country Director, Mr. Donal Keane.

Generate knowledge and support for NNH
LIBON will facilitate internships and masters thesis development of two IOM students per year on NNH-related topics and experiences of interest for LIBON. The IOM has formed a subcommittee for the selection of candidates for the internships and LIBON management participate in the review of thesis proposals and selection of candidates. The first two student researchers have been identified and will begin their assignments in July 2008. LIBON will also work with partners including the MoHP, USAID, the IOM, NFHP and CARE to identify, design and implement an **operations research** study in an area jointly identified by these national level stakeholders. Possible topics for study include the joint implementation of the PSBI prevention and treatment protocols (if chlorhexidine is approved for LIBON), community management of asphyxia as indicated by the CB-NCP and community-based health mortality surveillance. Results of the OR will be widely disseminated through presentations and a briefing document,

which will be shared both in Nepal and at the headquarters level in the US. It is envisioned that Plan will prepare concept ideas to initiate discussion through a meeting with national stakeholders (IOM, NFHP, USAID, CHD, FHD) in year 2 to a) encourage development of and support for a shared learning agenda at the national level, b) identify a topic for LIBON OR research, and c) identify support (technical assistants and/or reviewers from other organizations, IOM resources/field studies, etc.) for the LIBON OR effort.

e. Partner roles

The Institute of Medicine of Tribhuvan University is one of LIBON's strongest partners. The IOM is one of the major health training and research centers in the country. Based in Kathmandu, it delivers undergraduate, graduate, and short term public health trainings through a comprehensive Department of Community Health (including biostatistics training). The IOM collaborated with Plan previously in assessing the impact of the CS XVII project's Pregnant Women Groups on neonatal and infant mortality. IOM has also collaborated with the NFHP in the development and implementation of pre-service and in-service training curricula for neonatal care. In the LIBON project the IOM will take on the responsibility of conducting the LQAS and other surveys (under the project's supervision) during baseline, midterm and final evaluations. As will be discussed further in the next section, through collaboration with IOM, LIBON intends to sustain and expand the use of the monitoring and evaluation approaches introduced through Plan's CS Projects in Nepal. The partnership with the IOM is intended to institutionalize the LQAS survey methodology in one of Nepal's strongest scientific universities with the intent that they continue using it and including it in the teaching curriculum, thus sustaining its use in the country. See **Annex 7** for a Memorandum of Understanding signed by Plan's Country Director and the IOM to formalize this collaboration. Designated staff from the MoHP (Directorate of Health Services) and the IOM (Department of Community Health) learned the theory and practice of LQAS, RHFA and CSSA by accompanying LIBON staff and consultants in the design and implementation of these practices in Bara district for project baseline information. They will also participate in the mid-term and final surveys, and in the data analysis, preparation of reports, and dissemination of their results to the district stakeholders. After the designated MoHP/IOM staff is proficient in training others, LIBON will support the IOM to facilitate the LQAS trainings and surveys. LIBON will also collaborate with the Institute of Medicine to enable health science students to fulfill their academic requirements such as developing a masters thesis and field internships with LIBON. IOM faculty and graduate students will be invited to collaborate with field practitioners in LIBON districts to jointly document their experiences with LIBON, present them at national and international meetings and have them published in peer-reviewed journals.

Both District Development Committees and Village Development Committees are local government structures that play a central role in the GoN's decentralization and local governance strategy. They will be key local partners in the LIBON CS project. While the DDC's geographic area of influence is the district, the VDC's is a fraction of a district (comprised of an average of 9 wards). Several neighboring VDCs comprise one sub-district, though the sub-district has no local governance body. The LIBON project will work directly with 3 DDCs, 229 VDCs, and 39 sub-districts in the three districts.

The 1999 Decentralization Act defines the DDC and VDC as the top local governance bodies within their geographical areas of influence. The Act gives them the authority to plan and implement their own development programs with all stakeholders and in the case of the DDC, manage the government's health, education, and natural resource management staff and services in their localities.[27] The implementation of this law has been mixed. The most recent elections for DDC and VDC elected officials were held in 2001 and therefore many of the government members of the DDC and VDC are either government-appointed officials (e.g., the District Health Officers) or elected officials whose terms are due. Civil society is usually represented by local or international NGOs, and the representation of marginalized population groups is very limited in both bodies. The central government has not yet transferred the authority to hire and fire government personnel to the DDC. However, the current government is providing significant cash transfers to the DDCs and VDCs to carry out development programs in their localities. Each VDC receives central government transfers for development investments (approximately US$ 70,000 annually) of which at least 25% must be spent on social services (health and/or education). Given the evolution of political change in the country, it is likely that the trend towards decentralization will continue during the project period and therefore partnerships with these structures will remain crucial. The LIBON project will work closely with the 3 DDCs and the Sunsari and Parsa VDCs to further the objectives of the project. VDCs and DDCs may allocate resources to support LIBON project objectives, potential support includes support for FCHVs, support for emergency transportation and referral systems, procurement and distribution of drugs (CDP) and supplies, etc. LIBON staff will maintain open and ongoing communication with VDCs and DDCs to ensure coordination and collaboration.

LIBON's major partners within the DDC are the social sector or health committee-oriented member institutions, VDCs, CBOs and representatives from the private sector that are already grouped under the Reproductive Health Coordinating Committee. Any interested institution is welcome to participate in this committee, which is led by the DHO whose role is to coordinate the design, implementation, funding and monitoring of maternal, child and neonatal health initiatives in the district. The project will encourage its local NGO partners to join. One of the first measures that Plan will promote within the RHCC is the expansion of its membership to include children, women, and other marginalized populations. By providing space for those who may be disadvantaged to participate in local decision-making structures, LIBON's efforts will facilitate appropriate allocation of resources to those in need the most.

Plan will help to facilitate the initiatives that district stakeholders undertake in the areas of maternal, neonatal, and child health programming through collaborating in planning activities and provision of limited resources for activities within the scope of LIBON's work, if such needs are identified in the district's 5-year strategic plan and annual operating plan. Plan anticipates that the DDC will leverage additional contributions (such as goods, services, or labor) to carry out these plans. Some of the initial activities of the members of the RHCC will or have included:

- Sunsari and Parsa DHO and project staff organized and implemented a district-wide baseline survey of child, maternal, and newborn health KPC using LQAS as the sampling technique.

[27] Usually, a VDC is served by a sub-health post, while a sub-district is served by a Health Post or Primary Health Center.

- The Sunsari DHO organized and implemented a Rapid Health Facility Survey and a Child Survival Sustainability Assessment of the district. Parsa district will only conduct a CSSA and not a RHFA due to time and budget constraints.
- Based on the results of the LQAS, RHFA and the CSSA, the RHCC will support the preparation of a 5-year strategic plan to improve and sustain the health of children, mothers, and newborns in the district.[28] This 5-year strategic plan will have clear objectives, outputs, inputs, implementing, institutions and sources of funding. Apart from supporting the local initiatives directly related to the health of mothers, children and newborns, LIBON will promote within the Strategic Plan of the RHCC the progressive participation of all Village Development Committees of the district in the Community Drug Program, the provision of educational and training materials on neonatal health to all health facilities and FCHVs, and the progressive upgrading (infrastructure, equipment, drugs and supplies) of key health facilities to provide essential newborn services. This strategic plan will be approved by the President of the DDC and the DHO.
- Based on this strategic plan, the RHCC will prepare the first year annual operating plan to reduce maternal, neonatal, and child morbidity and mortality, with a clear indication of outputs, inputs, and results to be achieved in each zone, implementing institutions, funding sources (including central government transfer to the DDC and the VDC, LIBON and other local agencies), and a timetable. It will be approved by the DHO and by the assembly of the DDC. LIBON will provide technical support to this process including ensuring the use of relevant disaggregated data and participation of disadvantaged groups, and possible provision of support for specific activities within the plan.

With the facilitation of LIBON, the RHCC will meet every 3 months to analyze the progress being made by the sub-districts using the monthly MoHP production reports. Based on these reports, the RHCC will assess the progress made on the annual operational plan and will suggest corrections to all its implementers. LIBON will assist the implementers of the health promotion or service delivery activities included in the annual operating plan by coordinating community support and the use of diverse sources of funding and propose to the DDC additional resources or support needed to carry out the annual operating plan.

During the midterm and final periods of the project, LIBON will provide resources so that the DHO, with support from IOM and Plan, can carry out the LQAS and CSSA in the district. The former will use the same lots in order to compare progress made by all sub-districts during the period. When the results are ready, the RHCC will call a meeting of all DDC members and other local stakeholders to:

- Assess the progress made in the Annual Operating Plan.
- Suggest corrective actions or rewards for good performance to implementers of the health initiatives in the district.
- Disseminate among the district's population the results of this District LQAS (with comparisons across the sub-districts using a sub-district scorecard) and the Child Survival Sustainability Assessment using a district scorecard, a CSSA tool that will be utilized by the DHO to monitor progress toward targets. The publication of these results through FM radio

[28] From Plan's long experience working with local stakeholders in the country, to promote a broader agenda (which is not to limited to neonatal health) will be more politically acceptable. It will also be more conducive to strengthening local knowledge, capacity, and commitment towards newborn care.

will create social pressure so that the good performers will be emulated and rewarded. Similarly, the slow performers will be motivated to improve their work.

- Prepare an operational plan for the next period.

The Nepal Family Health Program was instrumental in helping to form the RHCCs and is also engaged in the CB-NCP roll out. NFHP will collaborate with LIBON to provide technical support with regard to provision of technical materials and technical support for activity design. The NFHP will also support the LIBON operations research study. Please see the MOU signed between LIBON and the NFHP in **Annex 9**.

LIBON will identify local NGO partners in each district and will build on Plan's successful experience from previous child survival projects by working with the Community Welfare Center and the Integrated Mother and Child Health Organization to support local organization and training activities.

f. CB-NCP training and service delivery

The CB-NCP includes standardized training materials for the seven distinct components and a phase wise plan for attaining national coverage. In Sunsari, as soon as it is ready to be rolled out by the MOHP, LIBON will adapt and field test the community-based integrated package of newborn interventions. This field application will take 12 to 18 months including the cascade of training and operationalization of components. At the health service delivery level, the CB-NCP package will be integrated with the GoN's national community-based IMCI program. To implement this CB-NCP package of services, beginning in the first project year, LIBON will use the community-based trained human resources and lessons learned in Bara to develop an effective service delivery strategy in Sunsari. This delivery strategy will be scaled up in Parsa in the Second Project Year beginning in July 2008.

LIBON will implement the comprehensive training program for all levels in the district and community health system. LIBON will support the training of all the District Health staff in the elements of the CB-NCP in Sunsari (beginning year 1) and Parsa (beginning year 2). This training will be followed-up with supportive supervision by LIBON and DHO staff. The training will prepare DHO staff to manage neonatal health problems at an early stage. LIBON will coordinate with the DHO to provide cascade CB-NCP training and materials in Sunsari and Parsa districts, and will support field implementation through on-site technical assistance. LIBON will train FCHVs to identify and provide initial treatment for neonatal complications during postnatal home visits. **Table 4** below presents the training plan for the CB-NCP to be conducted in the project districts throughout the life of the project. The MoHP is expected to begin a phase-wise roll out of the 7-component CB-NCP training between August and September of 2008. Materials for the first phase are being prepared and printed and a team of central level master trainers composed primarily of individuals from the government and international NGOs is being identified by the CB-NCP. Once the CB-NCP package is rolled out, the central level master trainers will first train the Sunsari district master trainers composed of individuals from the DHO with support from Plan and local NGOs working with the project. These district trainers will then conduct training throughout the district for facility and community level health workers.

Table 4. CB-NCP Training Plan for Sunsari and Parsa Districts

SN #	Level of training	Duration	Event	Number of participants per event	Nature of participants	Tentative Month	Remarks
A.	**Newborn Care Package training**						
1	National Level Master Training of Trainers (MTOT)	7 days	1	25	Plan Nepal including LIBON staff, IOM, MOHP national level and DHO staff district level trainers	Aug 08	In Kathmandu, with participation of Sunsari and Parsa district & project trainers
2	Planning meeting at district level/program orientation	2 days	3	40	Diverse stakeholders at district level	Sept 08	At district headquarters (HQ) for Sunsari and Parsa districts
3	District planning and orientation	1 day	3	50	DHO/District Public Health Office (DPHO) Technical supervisors	Sept 08	At district HQ for Sunsari and Parsa districts
4	District Training of Trainers (DTOT)	7 days	4	20	Potential Trainers from DHO/DPHO and HFs	Sept 08	At district HQ, 2 events for each district - Sunsari and Parsa districts
5	Health Facility (HF) *Ilaka* level	5 days	12	20	Sr. AHW, HA, AHW and ANM	Oct 08 – Jan 09, Oct-Dec 09	At *Ilaka*, 7 events for Parsa and 5 for Sunsari**
6	VHW/MCHW – SHP Level	6 days	13	20	VHW/MCHW	Apr-Jun 09 Jan-Mar 10	At *Ilaka*, 8 events for Parsa and 5 events for Sunsari
7	Basic training to FCHVs (first phase) at VDC (BPP, PNC, LBW)	3 days	106	20	FCHV/VHW/MCHW	Oct 08 – Jan 09 Oct-Dec 10	At SHP, 44 events for Parsa and 62 for Sunsari *
8	Basic training to FCHVs (second phase) for management of NN sepsis	4 days	106	20	FCHV/VHW/MCHW	Oct 08 – Jan 09 Oct-Dec10	At SHP, 44 events for Parsa and 62 for Sunsari *
9	VDC Orientation	1 day	137	20	Diverse stakeholders at VDC level	Aug-Oct 08	At VDC, 84 events for Parsa and 53 for Sunsari
10	Orientation to traditional healers/religious leaders	1 day	13	20	Traditional/Faith healers, religious leaders	Aug-Oct 08	At Ilaka, 8 events for Parsa and 5 for Sunsari
11	Orientation to district hospital staff and medical college hospital	1 day	4	20	Doctor, Sr. AHW, HA, AHW, ANM and other technical staff	Aug-Oct 08	At district HQ, 2 event for Parsa and 2 for Sunsari

Notes:

- Orientation of pregnant women's groups and mapping will be included in the district, Ilaka, VDC, FCHV levels during the newborn care package training

- Orientation of social audit will be included in the district, Ilaka, VDC level during the newborn care package training

**Parsa: HF level training: PHC 4 X 8 persons = 32, HP 8 X 4 person = 32, SHP 71 X 1 person = 71 persons, Total: 135

**Sunsari: HF level training: PHC 5 X 8 persons = 40, HP 7 X 4 person = 28, SHP 41 X 1 person = 41 persons, Total: 109

* Parsa: FCHV 796 (VDC = 738 + Municipality 58)

* Sunsari: FCHV 1244 (VDC = 1064 + Municipality 180)

g. LIBON project challenges

As is expressed in the Budget sections, Part D and **Attachment B**, the CB-NCP has undergone major changes including the incorporation of costly components since the time of LIBON's inception. This makes it impossible for LIBON to provide all of the seven components of the CB-NCP within the currently approved budget. Unanticipated costs associated with the new elements of the CB-NCP include: payment of performance-based incentives for FCHV, purchase of supplies for MCHWs and FCHVs, and the possible need to apply a standardized CB-NCP baseline survey. Additional changes are to not include LIBON districts in the newborn Vitamin A supplementation pilot. Since the MoHP has not approved chlorhexidine, this component will not be provided in the LIBON districts for Project Year 2. However, LIBON will be flexible and adapt to meet the newborn health care needs as guided by the MoHP and future large scale field trials. In addition to the national level programmatic changes and their associated challenges, Plan recognizes a need to modify its strategy in order to reach the 46% of the population living in municipalities. FCHV from municipalities are not supported by the DHO, but rather by the Ministry of local development and currently the DDC does not prioritize RHCC participation. Many municipal-based FCHV are not prepared or positioned to form and lead PWGs, as they will do in the rural areas. In order to achieve the social mobilization needed to reach LIBON project targets, LIBON will meet with UNICEF and DHO/RHCC/DDC in Sunsari to discuss building on UNICEF's nutrition groups and/or other partner activities as a strategy to reach urban populations. While conversations have taken place in regard to collaboration, no official agreement has been made as of July 2008. The LIBON Project Coordinator will organize a meeting with stakeholders by September 2008 to work out the details of collaboration in this regard. Additional unforeseen challenges that have caused activities to be delayed include social unrest and political instability, strikes and transportation blockages.

h. Strengthening the capacity of local partners and facilities

<u>Strengthening the capacity of district health facilities and staff</u>

In each project sub-district, LIBON will facilitate the training of MoHP staff on (see training plan in above section):

- The technical contents of the CB-NCP, including the prevention and case management of neonatal infections, specifically pneumonia.
- Management methods that improve the performance of local health staff and their interaction with the target population, such as the data for decision-making processes.
- Inter-personal communications skills for an improved provider-client relationship.

Training will be provided by MoHP/DHO trainers using MoHP-approved CB-NCP materials and manuals. LIBON will reproduce the training materials and provide logistic support for the training (e.g., lodging and meals of the trainers and trainees). Additionally, LIBON will assist MoHP facilities to develop and implement a monitoring/supervision and logistic/support system for the FCHVs.

LIBON will assist the DHO in the development of a fast and efficient referral system for seriously ill mothers and newborns from FCHV, children's caretakers and community groups to the closest MoHP facility. LIBON will support the revision of the patient referral system that was initially developed and pilot tested by the CS XVII project in the Bara district. The implementation of this system will include development of community plans to use locally available transportation for sick mothers and children and to develop a close working relationship with the referral facility. Communities themselves will identify barriers and the means by which to overcome them with resources available. LIBON will pilot test the proposed patient referral system among the communities and health facilities of one Sub-District for 6 months. LIBON will train community members, FCHVs, and first-level facility staff in the application of the referral system and organize meetings of FCHVs and health staff with local storekeepers, traditional healers, and community health volunteers to coordinate the operation of the referral. LIBON will prepare and distribute essential supplies and materials related to the system (e.g., referral slips and counseling materials).

In order to complement the technical assistance received, LIBON will coordinate with the MoHP, CDP, and other donor-funded health programs to provide necessary small equipment, supplies, and drugs to these facilities for distribution among CDP facilities and FCHVs.

LIBON will not support the District Hospitals because their complex operation is beyond the scope of this project. In addition, other external bi-lateral agencies (USAID, DFID, World Bank) are providing substantive support to their operations.

Behavior change

It is important to note that LIBON will be implementing BCC tools and activities within the context of the national program (CB-NCP).To promote behavior change, LIBON will first identify the key factors that influence neonatal care practices by mothers, caretakers, and health facility staff. Role plays, street dramas and puppet shows will be demonstrated by trained staff with community participation at PWG meetings. PWGs and child clubs will provide project partners the opportunity to develop and deliver messages on maternal and child health in a safe and friendly, group setting.

The Pregnant Women's Group strategy was successfully used in the previous CS XVII project and is explained in **Annex 8**. Each Pregnant Women's Group consists of an average of 8-12 pregnant women. Female Community Health Volunteers facilitate the groups and meetings are held once a month. The groups serve as a forum for discussion of health problems and for education of members and other women about pregnancy care and other maternal and child health topics. The PWGs are comprised primarily of a subset of women who already gather once a month for the GoN sanctioned Mothers Groups, and therefore PWGs often occur immediately after the Mothers Group meetings (depending on community preferences) to take advantage of

having community members, FCHV and CHW all gathered together. Any community member is welcome to attend, however, and in addition to pregnant women, their mother-in-laws are encouraged to participate. Participants develop community maps that show their homes and have dots indicating the services they have received, which they will update monthly at the meetings. Members will receive prenatal care (promoting at least 3 antenatal visits) at local health facilities. Since the creation of the groups, health facility staff report increases in antenatal check-ups, iron and folic acid supplementation among pregnant and lactating women, postnatal low dosage vitamin A supplementation for mothers after the first trimester, prenatal tetanus toxoid vaccinations, and immunizations among children aged 12-23 months.[29] The project will also work with child clubs in the district. LIBON will train club members in staging dramas in their villages to deliver health messages. Since communities often utilize the same space for child clubs and PWGs, materials and messages are easily shared and disseminated from group to group.

The LIBON project will encourage a "buddy system" within the PWGs in order to provide more intensive support for women to overcome barriers with regard to newborn care practices, safe delivery planning, and access to health care services. As part of this buddy system, early adopters of positive health behaviors will partner with a pregnant woman as her pregnancy progresses and her delivery date approaches. The PWG and the pregnant woman will select two or three peers to provide close support to her during the birth, delivery and post-partum period. This will facilitate the early diagnosis and efficient referral of suspected neonatal infections and danger signs. The meetings of these women's groups will hopefully attract non-members (such as mothers and mother-in-laws). Given that mother-in-laws play important roles in household decision making, their participation will be encouraged. Members of child clubs will take what they learn and share this information with their community networks: families, peers and classmates. LIBON members, NGO partners and district health staff will participate in the training of community volunteers and in outreach activities in the communities.

LIBON will continue using the printed materials, posters, pamphlets, and banners developed under the CS XVII project in addition to new materials produced by the CB-NCP. Based on Plan's previous experience using these materials, staff learned the importance of using the same language from the materials in the training for FCHVs. This ensures that the BCC materials and the FCHVs use the same words, thus decreasing the likelihood of confusion during service delivery. For case management of neonatal infections, LIBON will use the methods and materials developed by the MINI field trial. In both cases, these materials are for non-literate audiences and consist of diagrams that were carefully pre-tested and have proved useful in communicating health messages. Additional materials developed by the USAID-funded NFHP will be reproduced with permission and used in LIBON. The project will also make use of MoHP documents and training materials being produced by the Training sub-committee of the

[29] A study commissioned by Plan Nepal to an independent epidemiologist reported a significant decline in infant and neonatal mortality among members of the pregnant women's groups (as compared with non-member women). This result is consistent with more rigorous and systematic impact studies of similar interest groups in Nepal and Bolivia. For more information, please see - "Effect of a participatory intervention with women's groups on birth outcomes in Nepal: cluster-randomized controlled trial" in Lancet Vol 364, September 15, 2004. Please also see - "Impact of community organization of women in perinatal outcomes in rural Bolivia" Rev Panam Sal Pub. Vol 3, January 1998.

Neonatal Technical Working Group of which Plan Nepal's Health Coordinator is a member. The printed materials will be consistent with Ministry level recommendations.

Building on effective strategies from Plan's CS XVII project, LIBON will support radio broadcasts to reach the population using stations and times that are popular with the target populations. Participants in the broadcast will be local stakeholders, e.g., representatives of VDCs, RHCCs, marginalized groups, and the MoHP. Testimonies of the baseline situation and of the progress made through LIBON will be presented in these broadcasts. Radio programs developed by other projects (e.g., the SUMATA project funded by USAID) will also be broadcasted.

i. Work plan

All the partners participated in the development of the project work plan (**Table 5**). Each district team came to Kathmandu and met with the DIP team (Frank Manfredi, Carole Andre, Lisa Bowen) to discuss the focus of the support that Plan would be providing in their districts as part of this project. A portion of their time was dedicated to discussion of the work plan. Although many of the decisions about activities were made during the proposal development process, these were then refined during the DIP. The work plan is used as a basis for more detailed planning of activities and is constantly consulted by project and partner staff. Furthermore the project steering committee and district level RHCC and DHOs will periodically review the work plan as part of their planning and review process.

Table 5. Work Plan

Major Activities	Year 1				Year 2				Year 3				Year 4				Etc.	Personnel	Comments
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4			
	Oct – Dec 2007	Jan – Mar 2008	Apr – Jun 2008	Jul – Sep 2008	Oct – Dec 2008	Jan – Mar 2009	Apr – Jun 2009	Jul – Sep 2009	Oct – Dec 2009	Jan – Mar 2010	Apr – Jun 2010	Jul – Sep 2010	Oct – Dec 2010	Jan – Mar 2011	Apr – Jun 2011	Jul – Sep 2011			
Start-up and Administration:																			
Hire and train LIBON Staff	√	√			√													HRM, PC	
Purchase equipment	√	√	√															Admin, PC	
MOUs with IOM, NFHP and MoHP		√	√															CD, PC, HC	
Execution of MOUs with DDC and DHO				√	√													PUM, PC, DLC, HPC, Asst DLC,	
Preparation of DIP		√	√															CMT, PC, HPC, USNO	
DIP sharing with USAID – USA			√															HC, PC, USNO	
Prepare and sign formal agreements with partners (NGO/CBO/DHO/IOM) to implement the LIBON program in Sunsari, Parsa and Bara districts		√	√	√				√				√						CD, PUM, HC, PC, HPC, DLC, Asst DLC	
DIP revision and resubmission			√	√															
Result 1: Increased Access to NNH Services in Sunsari and Parsa																			
Design and preparation of modules on Community Based Newborn Care Package (CB-NCP) jointly Child Health Division (CHD), MoHP		√	√	√	√													HC, PC	
Master Training of Trainers (MTOT) on CB-NCP (5 persons each from Sunsari and Parsa) in Kathmandu organized by CHD			√	√	√													HC, PC	
District Training of Trainers (DTOT) on CB-NCP in Sunsari and Parsa districts (*Ilaka* In charge and DHO staff)				√	√	√	√											PC, HPC, DLC, Asst DLC	
Training on CB-NCP at *Ilaka* (sub-district) level in Sunsari and Parsa districts				√	√	√			√				√					PC, HPC, DLC, Asst DLC	
Training on CB-NCP at Sub-health post level in Sunsari and Parsa districts							√			√								HPC, DLC, Asst DLC	

Major Activities	Year 1				Year 2				Year 3				Year 4				Etc.	Personnel	Comments
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
Formation of pregnant women group (PWG) linking with local health facility in Sunsari and Parsa districts and strengthening of existing PWG in Bara district			√	√	√	√	√	√	√	√	√	√	√	√	√			HPC, DLC, Asst DLC	Will be started from disadvantaged group first
Pilot Emergency Referral system in one *Ilaka*									√	√	√							HC, PC, DLC, Asst DLC	
Train FCHVs on CB-NCP of interventions in Sunsari and Parsa districts					√	√	√	√	√				√					HPC, DLC, Asst DLC	
Result 2: Increased Demand for NNH Services in Sunsari and Parsa																			
Dissemination of CB-NCP message to community (mother) groups by FCHVs through using BCC methods and materials in Sunsari and Parsa districts						√	√	√	√	√	√	√	√	√	√	√		HPC, DLC, Asst DLC	
Support on BCC (flip chart, key ring with message) material of CB-NCP to FCHVs in Sunsari and Parsa districts					√	√	√	√	√				√					PC, HPC, DLC, Asst DLC	
Mass media (radio) BCC messages							√	√	√	√	√	√	√	√	√	√	√		
Result 3: Increased Quality of NNH Services in Sunsari and Parsa																			
FCHV participate in monthly monitoring and decision making meeting at the village level in Sunsari and Parsa districts			√	√	√	√	√	√	√	√	√	√	√	√	√	√		HPC, DLC, Asst DLC	
Support implementation of CB-NCP of service (Supportive supervision and monitoring) in Sunsari and Parsa districts						√	√	√	√	√	√	√	√	√	√	√		HC, PC	
Monthly review meeting in Ilaka (sub-health post and *Ilaka* in-charges) and district (DHO staff and *Ilaka* in-charges) level in Sunsari, Parsa and Bara districts		√	√	√	√	√	√	√	√	√	√	√	√	√	√			HPC, DLC, Asst DLC	
Training in application of LQAS and CSSA for MoHP, IOM, and District level stakeholders in Sunsari, Parsa and Bara districts		√	√	√			√	√			√	√			√	√		HC, PC, M&EO, HPC, DLC, Asst DLC	Please see detailed timeline in **Annex 1**
KPC survey application using LQAS in Sunsari, Parsa and Bara districts		√	√	√			√	√			√	√			√	√		PC, M&EO, HPC, DLC, Asst DLC	Please see detailed timeline in **Annex 1**
RHCCs prepare annual strategic and operational plans in Sunsari, Parsa and Bara districts			√			√				√				√				PC, HPC, DLC, Asst DLC	

Major Activities	Year 1				Year 2				Year 3				Year 4				Etc.	Personnel	Comments
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
Quarterly meeting of RHCCs in Sunsari, Parsa and Bara districts			√	√	√	√	√	√	√	√	√	√	√	√	√			PC, HPC, DLC, Asst DLC	
Result 4: Strengthened support for NNM reduction in Nepal																			
Publication on Neonatal health in Nepal (in coordination with CARE)					√				√				√			√		HC, PC	
Coordination and sharing meeting with USAID, NFHP, Care, MIRA and others INGOs working on neonatal program	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		HC, PC	
Meeting with District stakeholders in Sunsari, Parsa in regard to municipality approach for community mobilization					√		√											PC, LDC, Asst LDC	
Quarterly steering committee meeting	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		CD, HC, PC	
LIBON staff participate in the neonatal/sub-committee technical group of the Child Health Division		√	√															HC, PC	
IOM student apprenticeships and internships in LIBON implementation sites				√				√				√				√		HC, PC	
Plan, conduct and share Operations Research study/results on priority NNH topic							√	√	√	√	√	√						HC, PC	
Presentation if results in international forum											√							HC, PC, HQ backstops	
Monitoring and Evaluation:																			
Submit financial and program reports to Plan USA	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		PC, AFA, GA	
Baseline study (LQAS, CSSA, IHFA)		√																HC, PC, M&EO, HPC, DLC, Asst DLC, AFA	
Technical Assistance visits from Plan USA staff		√		√	√			√		√		√		√		√		HQ backstops	
Mid-term evaluation								√										HC, PC, M&EO, HPC, DLC, Asst DLC, AFA	
Final Evaluation																√		HC, PC, M&EO, HPC, DLC, Asst DLC, AFA	
Collaboration with USAID:																			
Monthly meeting with USAID funded partners on child survival		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		HC, PC	
Quarterly coordination meeting with USAID, Local Mission	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		HC, PC	
Reporting: Annual, Mid-term, Final Evaluation to USAID					√				√				√			√		HC, PC, M&EO, AFA	

3. Program Monitoring and Evaluation

a. M&E system strengthening

LIBON will emphasize the importance of complete, timely, accurate, and specific data collection and analysis to support strategic decision-making that includes all stakeholders in the monitoring and evaluation process. For project monitoring and system strengthening purposes, LIBON will introduce new tools and methods (including KPC/LQAS and CSSA), support and strengthen ongoing MOHP data management systems, and facilitate community-based monitoring and reporting on health data. Both project staff and MOHP staff will be involved in the project monitoring and evaluation activities.

LIBON Monitoring and Evaluation Tools and Methods

Utilizing the Lot Quality Assurance Sampling methodology, the project will monitor select project indicators annually. This monitoring will include questions from the KPC at the household level and health worker performance. The project has already worked with local and national stakeholders to complete a baseline KPC (using LQAS methodology), RHFA and a CSSA workshop in Sunsari District. In Parsa the KPC survey is complete and the CSSA workshop is scheduled for 28 July 2008. (Application of the RHFA tool for monitoring purposes has been eliminated due to time and budget constraints.) Bara baseline indicators and values were not recollected since the Final Evaluation from the previous project will serve as the district baseline. Participation in the monitoring and evaluation of the project through competency based training and learning with LQAS increases the capacity of the MoHP and stakeholders to sustain the use of LQAS as a monitoring tool once the project has ended. Indicators will be developed and monitored by project staff and local partners through participatory assessments using the Child Survival Sustainability Assessment. Results from the baseline and ongoing monitoring will serve project staff and stakeholders in decision-making and allocation of resources.

MoHP Service Data

The project monitoring and evaluation system will complement the current MoHP system, which is largely dependent on facility-based data and service data from community volunteers. Health facilities collect a variety of information including disease cases, treatment, supplies/pharmaceutical inventories, referrals, counter-referrals, pre/post-natal care, births, deaths, etc. Community volunteers including FCHVs record both preventative and curative service data, such as immunizations, pneumonia cases, pre-natal/post-natal care, iron supplementation, educational sessions, and referrals. Health facility staff record similar data as FCHVs, including cases and treatment information. LIBON will support and reinforce these processes and the MoHP data will be used for project monitoring. A demonstrated success in Plan's previous CS XVII in Bara District, LIBON will also introduce community data boards to promote greater involvement of community leaders and members in the analysis of and response to current, local health information. Increased knowledge and involvement at the community level will lead to increased interest, motivation, and mobilization of the community to take action to improve their health status.

Community-based Data Collection and Monitoring

Pregnant Women's Groups are a platform for collecting accurate and complete data from communities on key health practices. PWG members do this by updating the behavior maps of

their community during their monthly meetings. The community behavior maps are maps on which women place a colored thumbtack beside individual households to show compliance or non-compliance with desired and targeted health behaviors. In addition to community behavior mapping, community data boards will be introduced in which select health information is aggregated and posted for all community members to see. Community data boards have been successful in Bara as tools for monitoring and awareness raising. The project will utilize community data boards in Sunsari and Parsa to further involve leaders and other members in data collection, analysis and decision making.

b. System integration

Project staff and District Health Office staff have already met to jointly identify how information collected by each party can be analyzed and utilized by the other. In Bara District, for example, the MOHP requested that LIBON align its Supervision Areas (SA) for LQAS monitoring with the DHO wards in order for the project to generate data based on Supervision Areas of relevance (based on geopolitical boundaries such as wards) to the MoHP. LIBON will likewise ensure use of the SA with relevance to the MoHP in Sunsari and Parsa. Both project and MoHP staff will be involved in the collection and analysis of both facility-based and community-based data and will become proficient in using data collection tools and processing and disseminating the data in meaningful ways with stakeholders. The two types of data will strengthen project monitoring through verification (triangulation) of results and identification of weaknesses with both the programs technical interventions and operational processes.

c. Data collection

The project will use the KPC and supervision checklists for LIBON staff, community health workers and volunteers to monitor project indicators using LQAS on an annual basis. Additionally, the project will utilize information collected through MoHP tools such as reporting forms and registers. Certain data are collected at the community level and reported monthly during supervision meetings. FCHVs collect data and submit their reports during monthly supervision meetings at the ward level. Ward level data is aggregated and reported to sub health posts. Sub health post level data is aggregated and submitted to the Ilaka/health facility level, and flows up the chain to the DHO at the national level.

Many of the reporting tools that will be utilized are currently in use whereas others have been newly developed as part of the CB-NCP. The CB-NCP monitoring tools will be standardized to facilitate the monitoring of the implementation of the national level program. In addition, the project will work with the DHO, DDC and community leaders to incorporate use of the community data board.

1. Sources of data: Data will be collected through the use of household surveys, facility-based records, FCHV and traditional birth attendant (TBA) records, and observation and supervision checklists.
2. Determination of population size and entry process for beneficiaries: District-wide implementation of the project facilitates accessing accurate population figures. The project uses government census data to determine the population size of the district. All women and children residing in the district are beneficiaries of the outreach services and those offered at the health facilities. FCHVs and TBAs identify new

pregnancies and births and raise awareness in the communities of available MOHP services. Community leaders, mothers' groups, and Health Facility Management Committees (including HF staff) also participate in mobilization activities.

3. Frequency of data collection: FCHV, TBA, and health facility records and reports are collected on a monthly basis and compiled quarterly. Monitoring of project indicators using LQAS will be done annually.
4. Data collectors: Health facility staff, FCHVs and TBAs will collect data regarding the services they provide. Project staff, MoHP and partner staff will participate in the LQAS surveys.
5. Stakeholder participation: Project, MOHP, and partner staff all participate in every aspect of the LQAS monitoring. FCHVs and TBAs record data about their activities. Community data boards will promote broader participation at the llaka level.

d. Supervision of data collection

Records and reports from volunteers and health facilities will be checked during joint supervision visits of LIBON project and MoHP staff during ward level, SHP level, health facility level, and district level supervision meetings. LIBON staff will review records and reports prepared by volunteers and health workers and guide them to accurately complete this task. LIBON staff will introduce peer review of data during HF level supervision meetings. In regard to the KPC survey, project staff and project-trained MoHP staff will oversee the survey administration to assess interviewing and data recording skills. During LQAS monitoring, Field Area supervisors will be responsible for overseeing the household selections, interviews and documentation in their assigned areas.

Both project and MoHP staff will supervise volunteers and health facility staff. Supervision protocols and checklists will assist in self-assessments based on performance. These assessments will provide the opportunity for the supervisor to counsel and encourage the health worker on how to improve his/her skills. When LIBON Facilitators identify any weaknesses in reporting by specific workers or wards, the Facilitator will follow up to identify and correct the issue through supportive supervision.

e. Data analysis

Data collected during LQAS surveys will be hand tabulated in the district immediately after collection with participation of MoHP staff and under the supervision of the Field Area supervisors and the LIBON Project Coordinator. This information will be entered into Epi-Info for analysis and crosschecked with the manual tabulations to ensure consistency. RHFA data is collected and entered into an Excel sheet with the tabulation plan developed by Child Survival Technical Support + (CSTS+) for the purpose of analysis at some point. Results from LQAS and RHFA are shared at the district level and analyzed and discussed in relation to MoHP data before being shared at the national level. Records and reports from health workers are paper-based and are collected, aggregated and analyzed on a monthly basis from the sub health post level to the district level.

f. Indicators and targets

Indicators for the LIBON project were developed in consultation with partners and stakeholders at the national and district levels. Representatives from USAID, NFHP, CARE and DHOs all

participated in the development, review, and/or approval process for the indicators before the surveys were administered. Targets for the LIBON project indicators were set in ongoing consultation with district health staff including DHOs from Sunsari and Parsa. Baseline results were shared with stakeholders from Sunsari and Parsa districts during detailed implementation planning meetings at which point the originally proposed targets were revisited/revised according to the baseline results. Birth spacing was not included as an indicator for LIBON due to some confusion based on the elimination of the indicator from the Rapid CATCH guidance; however, based on the DIP reviewer feedback, LIBON will incorporate birth spacing as an indicator in future surveys.

In Bara, LIBON aims to sustain the advances made in the previous project and will set the EOP targets according to the Bara baseline values (from Bara FE).

In Sunsari and Parsa, LIBON Results 1, 2 and 3 will be monitored and evaluated with a KPC survey questionnaire developed specifically for the LIBON project and applied annually utilizing LQAS. Additional project indicators will be utilized to complement KPC data, as shown in **Table 6**. The baseline assessment report is included in **Annex 6.**

Table 6. Baseline KPC Results for 0-5 Months Findings and End-of-project Targets, Sunsari and Parsa Districts

GOAL: To Sustainably Reduce Neonatal Mortality in Nepal									
SN KPC	**Project Objective**	**Indicator**	**Source / Measurement Method**	**Frequency**	**Baseline Sunsari (Jan 08)**	**EOP Target Sunsari (Sep'11)**	**Baseline Parsa (Feb 08)**	**EOP Target Parsa (Sep'11)**	**Related Activities**
Result 1: Increased Access to NNH Services in Sunsari and Parsa									
1.1 Community Outreach Mechanisms Expanded									
Antenatal									
5	To maintain or decrease the incidence of maternal and neonatal tetanus	Percent of mothers of children aged 0-5 months protected against tetanus by getting second dose of TT vaccine	LQAS	Annual	83.5%	Maintain	88.7%	Maintain	• Awareness program during/outreach clinic (ORC) through ANC/mothers' group/PWG meeting • Support of vaccine cards promotion & vaccines • Support of plastic cover for cards • Support to logistic supply of vaccines & maintenance
6	To increase the percent of pregnant women receiving adequate antenatal care	Percent of mothers of children aged 0-5 months with 4 times ante-natal visit who were checked by ANM or AHW or Staff Nurse or HA or doctor	LQAS	Annual	29.1%	55%	24.7%	55%	• Awareness/counseling to pregnant mothers during ANC/ORC through mother group/PWG meeting • Regular supply of iron tablets at ANC visit • Provide refresher training to community health workers • Strengthening of counseling corner • Capacity building of HF staff / FCHVs • Preparation & placement of pregnancy rule out check-list / guidelines on ANC & post partum care

7	To increase the percent of pregnant women receiving adequate antenatal care	Percent of mothers of children aged 0-5 months with 6 times ante-natal visit who were checked by ANM or AHW or Staff Nurse or HA or doctor	LQAS	Annual	8.8%	35%	6.5%	35%	• Provide counseling about importance of ANC visit • Regular supply of iron tables at ANC visit • Provide refresher training to community health workers
8	To increase the percent of pregnant women receiving adequate antenatal care	Percent of mothers of children aged 0-5 months with 4 times ante-natal visit who were checked by MCHW, ANM or AHW or Staff Nurse or HA or doctor	LQAS	Annual	43.5%	65%	30.0%	55%	• Provide Refresher training for MCHW • Equip the ORC with minimum health check up facility and necessary commodities
9	To increase the percent of pregnant women receiving adequate antenatal care	Percent of mothers of children aged 0-5 months with 6 times ante-natal visit who were checked by MCHW, ANM or AHW or Staff Nurse or HA or doctor	LQAS	Annual	13.7%	40%	6.9%	40%	• Provide Refresher training for MCHW • Equip the ORC with minimum health check up facility and necessary commodities
10	To decrease the percent of women and newborns with iron deficiency anemia	Percent of mothers of children aged 0-5 months receiving iron foliate tablets/caps at least for 4 months during their pregnancy	LQAS	Annual	63.2%	80%	44.1%	70%	• Increase supply of Iron tablets to all health facilities • Continue supply to all FCHVs • Strengthening supportive supervision on recording reporting & monthly review meeting • Refresher training on iron intensification
11	To decrease the percent of women and newborns with iron deficiency anemia	Percent of mothers of children aged 0-5 months receiving iron foliate tablets/caps at least for 6 months during their pregnancy	LQAS	Annual	47.7%	75%	25.9%	60%	• Increase supply of iron tablets to all health facilities • Continue supply to all FCHVs • Strengthening supportive supervision on recoding reporting & monthly review meeting • Refresher training on iron intensification
12	To increase the percent of pregnant women	Percent of mothers of children aged 0-5 months suffering from night	LQAS	Annual	10.3%	45%	0%	35%	• Provide one-day orientation on vitamin A program to all community health workers

	experiencing night blindness who receive treatment	blindness during their pregnancy and receiving low-dose vitamin A (25,000 IU)*							• Awareness program to all pregnant women about night blindness and its prevention
13	To decrease percent of pregnant women suffering from helminthes during pregnancy	Percent of mothers of children aged 0-5 months receiving a single dose of albendazole (400 mg) after completion of three month of last pregnancy	LQAS	Annual	62.8%	85%	37.7%	65%	• Provide single dose albendazole to pregnant mothers during ANC visit • Provide importance of albendazole during PWG meeting.
Delivery									
15	To increase percent of women accessing skilled delivery care	Percent of mothers of children aged 0-5 months whose birth was attended by a skilled provider (doctor or nurse or HA or AHW or ANM)	LQAS	Annual	45.3%	55%	38.5%	45%	• Provide counseling to pregnant mothers about importance delivery attend by skill providers. • Provide quality delivery services and care during delivery.
16	To increase percent of women accessing skilled delivery care	Percent of mothers of children aged 0-5 months whose birth was attended by a skilled provider (doctor or nurse or HA or AHW or ANM or MCHW)	LQAS	Annual	46.7%	60%	41.3%	50%	• Quality skill development of MCHW through monthly review meeting • Supply safe delivery kits
Postnatal									
23	To maintain or increase percent of sick newborns receiving care	Percent of mothers with children aged 0-5 months whose newborn children with signs of severe illness were seen by a qualified public or private provider	LQAS	Annual	89.1%	Maintain	93.5%	Maintain	• Provide awareness education on danger signs of newborn and how to care for newborn to pregnant mothers
24	To increase percent of newborns receiving a check up from a skilled provider within two days of birth	Percent of mothers with children aged 0-5 months (and their newborns) who received a first checkup by a skilled provider (doctor or nurse or HA or AHW or ANM) within the first two days of birth	LQAS	Annual	29.5%	55%	23.9%	50%	• Organize training to MCHW/village health workers (VHWs) on assessment for new born child • Ratio / FM talk program • Street drama program • Strengthening the post natal contact corner in the HFs

25	To increase percent of newborns receiving a check from a skilled provider up within two days of birth	Percent of mothers with children aged 0-5 months (and their newborns) who received a first checkup by a skilled provider (doctor or nurse or HA or AHW or ANM or MCHW) within the first two days of birth	LQAS	Annual	30.9%	60%	25.9%	50%	• Organize VHWs training to MCHW/ on assessment for new born child • Regular monitor & maintenance of MCHW kit
26	To increase percent of newborns receiving a second check up from a skilled provider within 3-7 days of birth	Percent of mothers with children aged 0-5 months (and their newborns) who received a second post-natal checkup by a skilled provider (doctor or nurse or HA or AHW or ANM) within 3-7 days after birth	LQAS	Annual	0.7%	25%	1.2%	25%	• Organize training to MCHW/VHWs on assessment for new born child • Radio / FM talk program • Strengthening the post natal contact corner in the HFs
27	To increase percent of newborns receiving a second check up from a skilled provider within 3-7 days of birth	Percent of mothers with children aged 0-5 months (and their newborns) who received a second post-natal checkup by a skilled provider (doctor or nurse or HA or AHW or ANM or MCHW) within 3-7 days after birth	LQAS	Annual	0.7%	25%	1.2%	25%	• Organize VHWs training to MCHW/ on assessment for new born child • Regular monitor & maintenance of MCHW kit
30 ***	To prevent infection among newborns	Percent of newborns whose umbilical stump was first applied with chlorhexidine 4% within 24 hours of birth	LQAS	Annual	0%	40%	0%	40%	• Orientation of chlorhexidine application on the umbilical stump / availability of chlorhexidine up to FCHV level • Provision on incentive for FCHV
32	To decrease percent women and children with Vitamin A deficiency	Percent of mothers of children aged 0-5 months who received vitamin A (200,000 IU) within 45 days after delivery	LQAS	Annual	60.4%	80%	47.8%	75%	• Adequate supply of Vitamin A (200,00 IU) up to FCHVs • Update recording system, • Adequate supply of gentamincin, cotrim upto FCHVs
33*	To increase treatment of infection among neonates	Percent of neonates with PSBI diagnosed by a health worker or FCHV within 48 hours of onset	LQAS	Annual	69.2%	90%	36.4%	75%	• Organize training on neonatal care, assessment, identification of PSBI and referral mechanism for FCHVs • Establishment of call & referral system

									for prompt treatment
34	To increase treatment of infection among neonates	Percent of neonates with PSBI given a first dose of oral antibiotics within 48 hours of onset	LQAS	Annual	17.9%	60%	0%	40%	• Organize training on neonatal care, assessment, identification of PSBI and referral mechanism for FCHVs • Adequate supply cotrim up to FCHV • Establishment of call & referral system for prompt treatment
35	To increase treatment of infection among neonates	Percent of neonates with PSBI given a first dose of oral antibiotics within 48 hours of onset for 3 days	LQAS	Annual	2.6%	50%	0%	45%	• Organize training on neonatal care, assessment, identification of PSBI and referral mechanism for FCHVs • Adequate supply of cotrim upto FCHV • Establishment of call & referral system for prompt treatment
36*	To increase treatment of infection among neonates	Percent of neonates with PSBI given a first dose of oral antibiotics within 48 hours of onset for 3 to 5 days	LQAS	Annual	17.9%	65%	0%	40%	• Organize training on neonatal care, assessment, identification of PSBI and referral mechanism for FCHVs
Cross Cutting – Social Inclusion									
	To increase access to health information and services among DAGs**	Percent of DAG members participating in PWGs	LIBON Annual Report	Annual	0	100%	0	100%	• LIBON Facilitators and FCHV monitor DAG participation through behavior mapping and follow up through outreach to any DAG member not participating
	To increase participation of DAG and representation of the needs of DAG in Health Facility Management Committees / VDC level	Percent of HFMC with participation of DAG members	LIBON Annual Report	Annual	Not avail-able	100%	Not Avail-able	100%	• LIBON Facilitators attend HFMC meetings and follow up to support DAG members to enhance their ability to participate • LIBON facilitators document monthly participation and concerns for follow up

Result 2: Increased Demand for NNH Services in Sunsari and Parsa									
2.1 Mothers recognize risks associated with pregnancy, delivery, and neonatal period									
Antenatal									
1	To increase care seeking for skilled delivery care	Percent of mothers of children aged 0-5 months having a birth preparedness plan already coordinated with their closest health worker during their pregnancy	LQAS	Annual	25.6%	55%	11.3%	40%	• Training of birth preparedness to MCHW and FCHVs • Awareness program during ANC visit, PWG meeting • Awareness program to mother-in law/husband • Strengthening/formation of pregnancy evacuation scheme
2	To increase care seeking during pregnancy	Percent of mothers of children aged 0-5 months who know at least two danger signs during pregnancy	LQAS	Annual	46.7%	70%	51.0%	70%	• Strengthening the counseling part through establishing counseling corner • Message delivery through strengthening the mothers group meeting through PWG orientation
Delivery									
14	To increase care seeking for emergency intra-partum services	Percent of mothers of children aged 0-5 months who know at least two danger signs during delivery	LQAS	Annual	17.2%	45%	27.1%	45%	• Strengthening the counseling part through establishing counseling corner • Message delivery through strengthening the mothers group meeting through PWG orientation
Postnatal									
18	To increase care seeking during postpartum period	Percent of mothers of children aged 0-5 months who know at least two danger signs after delivery	LQAS	Annual	20.4%	40%	27.5%	40%	• Provide awareness education on danger sign of pregnancy, delivery for pregnant mothers
19	To increase care seeking during newborn period	Percent of mothers of children aged 0-5 months who know at least two danger signs among newborns	LQAS	Annual	62.8%	85%	75.7%	85%	• Provide awareness education on danger sign of newborn and how to care new to pregnant mothers
20 ***	To increase preventive measures taken against newborn infection	Percent of mothers of children aged 0-5 months who know how to apply chlorhexidine on the umbilical stump	LQAS	Annual	0%	55%	0%	55%	• Orientation of chlorhexidine application on the umbilical stump / availability of chlorhexidine up to FCHV level • Provision of incentive for FCHV

21	To increase preventive measures taken against newborn morbidity	Percent of newborns who were breast-fed within one hour of birth	LQAS	Annual	33.0%	65%	17.4%	50%	• Increase awareness of pregnant mothers about breast feeding during ANC • Promotion of breast feeding though PWG / Mother group meeting • Celebration of breast feeding week • Awareness / message delivery through IEC materials about importance of colostrum / breast feeding
22*	To decrease risk of hypothermia	Percent of newborns immediately after birth, who were dried off, exposed to a heating source (including kangaroo care) and avoided bathing for 24 hours	LQAS	Annual	36.8%	65%	29.6%	60%	• Education on importance of immediate care of new born to pregnant mothers during ANC/PWG meeting
Result 3: Increased Quality of NNH Services in Sunsari and Parsa									
***3.1* NNH monitoring and planning systems strengthened**									
Antenatal									
3	To increase effectiveness of antenatal care	Percent of mothers of children aged 0-5 months who were counseled on at least 1 counseling point during antenatal check-up	LQAS	Annual	71.6%	80%	69.2%	80%	• Increase awareness on number of ANC counseling episode during ANC • Preparation & placement of ANC/PNC guidelines
4	To increase effectiveness of antenatal care	Percent of mothers of children aged 0-5 months who were counseled on at least 3 counseling points during antenatal check-up	LQAS	Annual	33.0%	55%	17.0%	50%	• Increase awareness on number of ANC counseling episode during ANC • Preparation & placement of ANC/PNC guidelines.

Delivery									
17	To decrease risk of infection during delivery	Percent of birth attendants who washed their hands with soap before assisting in the procedure	LQAS	Annual	74.7%	85%	75.7%	85%	• To increase percentage of birth delivery providers who washed their hands with soap before assisting in the procedure
22*	To decrease risk of hypothermia	Percent of newborns immediately after birth, who were dried off, exposed to a heating source (including kangaroo care) and avoided bathing for 24 hours	LQAS	Annual	36.8%	65%	29.6%	60%	• Education on importance of immediate care of new born to pregnant mothers during ANC/PWG meeting
Postnatal									
28	To increase care seeking for newborn infection	Percent of neonates with PSBI referred to a health worker for parenteral antibiotics within 48 hours of onset	LQAS	Annual	2.6%	55%	0%	55%	• Organize training on neonatal care, assessment, identification of PSBI and referral mechanism for FCHVs • Adequte supply of gentamycin injection/co-trim • Strengthen the recording & calling systems.
29	To decrease newborn morbidity and mortality associated with infection	Percent of neonates treated with antibiotics due to PSBI who completed the course of antibiotics	LQAS	Annual	0%	55%	0%	55%	• Organize training on neonatal care, assessment, identification of PSBI and referral mechanism for FCHVs • Strengthen the follow-up system
31	To increase preventive measures taken against newborn morbidity	Percent of children of mothers aged 0-5 months who were fed colostrum	LQAS	Annual	84.6%	95%	84.6%	95%	• Advocacy on child friendly hospital / HFs • Awareness on colostrum feeding through PWG/ mothers group meeting / ANC visit
33*	To increase treatment of infection among neonates	Percent of neonates with possible severe bacterial infections (PSBI) diagnosed by a health worker or FCHV within 48 hours of onset	LQAS	Annual	69.2%	90%	36.4%	75%	• Organize training on neonatal care, assessment, identification of PSBI and referral mechanism for FCHVs • Establishment of call & referral system for prompt treatment

36*	To increase treatment of infection among neonates	Percent of neonates with PSBI given a first dose of oral antibiotics within 48 hours of onset for 3 to 5 days	LQAS	Annual	17.9%	65%	0%	40%	• Organize training on neonatal care, assessment, identification of PSBI and referral mechanism for FCHVs
Result 4: Strengthened support for NNM reduction in Nepal									
4.1 Data generated and utilized to inform national level policy									
	To increase knowledge and interest in NNH intervention processes and outcomes	Number of NNH-focused newsletters published and distributed by LIBON at national level	LIBON Annual Report	Annual	0	2 annually national	0	2 annually national	• Coordinate with CARE on semi-annual publication
	To increase capacity of MOHP at national level to monitor, assess and refine NNH interventions	Number of MOHP units (health facilities) receiving technical assistance from the MOHP in KPC/LQAS	LIBON Annual Report	Annual	0	20 total national	0	20 total national	• Facilitate LQAS competency-based training workshops • Introduce participatory data analysis processes • Facilitate CSSA workshops and annual reviews
	To generate knowledge and interest in NNH interventions for policy and program application	Number of IOM students with field rotations and internships at LIBON sites.	LIBON Annual Report	Annual	0	2 annually national	0	2 annually national	• Facilitate and support IOM student researchers' documentation of NNH-related data
	To share knowledge and in regard to NNH interventions for policy and program application	Number of papers disseminated and/or presentations made based on LIBON project (authored by LIBON stakeholders: MoHP, IOM students, and Plan Nepal)	LIBON Annual Report	Annual	0	3 annually	0	3 annually	• Share student thesis paper with SC, national level stakeholders • Document and disseminate OR study results to National Neonatal Sub Committee

**Indicators 22, 33 and 36 contribute to multiple results*
***DAG are defined in Section 2 and based on the GoN definition and coding system*
****Achieving indicators 20 and 30 will depend on whether or not the GoN approves chlorhexidine for inclusion in LIBON*

g. KPC/Rapid CATCH

In addition to monitoring the indicators presented in the LIBON-specific questionnaire for mothers of children 0-5 months in Sunsari and Parsa, as presented in **Table 7**, the LIBON project will apply the KPC/Rapid CATCH questionnaire for mothers of children under 2 years. Both questionnaires were applied at baseline in these two districts and will be re-applied at FE, however only the indicators from the LIBON-specific questionnaire have set targets that will be used by LIBON staff and partners to measure LIBON project results. In Bara District, indicators and values from the Final Evaluation of the Plan Nepal CS XVII cost extension project will be used as baseline for LIBON. LIBON will monitor the Bara District utilizing the same KPC survey tool that was applied at FE.

LIBON will apply the Rapid CATCH KPC questionnaire in Sunsari and Parsa as required by the CSHGP, although project targets will not be set according to these indicators. Baseline values from Rapid CATCH indicators in Sunsari and Parsa are presented below.

Table 7. Rapid CATCH Baseline Indicator Values: Baseline LQAS of under 2 years findings and target set of Sunsari and Parsa districts

SN	Indicator	Baseline Sunsari (Jan-Feb 08)	Baseline Parsa (Jan-Feb 08)
1	Tetanus Toxoid: % of mothers with children age 0-23 months who received at least 2 tetanus toxoid vaccinations before the birth of their youngest child	89.8%	95.1%
2	Skilled Delivery Assistance: % of children age 0-23 months whose births were attended by skilled personnel	47.4%	36.4%
3	Post-Natal Visit to Check on the Newborn: % of children age 0-23 months who received a post-natal visit from an appropriate trained health worker within three days after birth	43.2%	27.9%
4	Exclusive Breastfeeding: % of children age 0-5 months who were exclusively breastfed during the last 24 hours	67.7%	80.7%
5	Infant and Young Child Feeding: Percent of children age 6-23 months fed according to a minimum of appropriate feeding practices	69.6%	32.5%
6	Vitamin A Supplementation: % of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall	87.3%	70.7%
7	Measles Vaccination: % of children aged 12-23 months who received measles vaccine according to the vaccination card or mother's recall by the time of the survey	85.9%	77.6%

SN	Indicator	Baseline Sunsari (Jan-Feb 08)	Baseline Parsa (Jan-Feb 08)
7a	Measles Vaccination: % of children aged 12-23 months who received measles vaccine according to the vaccination card by the time of the survey (Card coverage)	21.7%	10.3%
8	Access to Immunization Services: % of children aged 12-23 months who received DTP1 according to the vaccination card or mother's recall by the time of the survey	94.6%	87.9%
8a	Access to Immunization Services: % of children aged 12-23 months who received DTP1 according to the vaccination card by the time of survey (Card Coverage)	31.5%	18.7%
9	Health Systems Performance Regarding Immunization Services: % of children aged 12-23 months who received DTP3 according to the vaccination card or mother's recall by the time of the survey	88.0%	80.4%
9a	Health Systems Performance Regarding Immunization Services: % of children aged 12-23 months who received DTP3 according to the vaccination card by the time of the survey (Card Coverage)	30.4%	15.9%
10	Treatment of Fever in Malarious Zones: % of children age 0-23 months with a febrile episode during the last two weeks who were treated with an effective anti-malarial drug within 24 hours after the fever began	44.4%	45.3%
11	ORT Use: % of children age 0-23 months with diarrhea in the last two weeks who received Oral Rehydration Solution and/or recommended home fluids	39.3%	29.4%
12	Appropriate Care Seeking for Pneumonia: % of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider	46.0%	36.0%
13	Point of Use: % of households of children age 0-23 months that treat water effectively	34.7%	6.1%
14	Appropriate Hand Washing Practices: % of mothers of children age 0-23 months who live in households with soap at the place for hand washing	73.0%	57.5%
15	ITN Use: % of children age 0-23 months who slept under an insecticide-treated bed net the previous night	0%	0%
16	Underweight: % of children age 0-23 months who are underweight (-SD for the median weight for age, according to WHO/NCHS reference population)	13.0%	10.5%

The Bara FE took place in June 2006, preceding the September close of the project. LIBON aims to maintain the FE indicator values at the level that the previous project attained, as shown in **Table 8**. The FE report is included in **Annex 5**.

Table 8: Bara Final Evaluation Indicator Values

Indicator/Definition	Baseline LQAS **Oct 01**	LQAS **Jun 06**
BREAST FEEDING AND CHILD NUTRITION INDICATORS		
Percent of children aged 0-11 months who are breastfed with in the first hour after birth	**9**	**66**
Percent of infants aged 0-5 months who were fed breastfed milk only in the last 24 hours	**62**	**100**
Percent of infant aged 6-9 months who received breast milk and solid foods in the last 24 hours	**73**	**96**
Percent of children aged 20-23 months who are still breast feeding	**77**	**85**
Percent of children aged 6-23 months who received a vitamin A does in the last six months	**91**	**99**
CHILDHOOD IMMUNIZATION INDICATORS		
Percent of children aged 12-23 months who have a Vaccination Card	**19**	**74**
Percent of children aged 12-23 months who received DPT1	**16**	**71**
Percent of children aged 12-23 months who received measles vaccine	**11**	**72**
Percent of drop out- rates between DPT1 and DPT 3	**14**	**3**
Percent of children aged 12-23 months who received BCG, DPT3, OPV3 and measles vaccines before the first birthday	**10**	**67**
Percent of children aged 12-23 months who received OPV3	**14**	**72**
SICK CHILD		
Percent of mothers of children aged 0-23 months who know at least **THREE** signs of childhood illness that indicate the need for treatment	**73**	**98**
DIARRHEA INDICATORS		
Percent of children aged 0-23 months with diarrhea in the last two weeks	**20**	**21**
Percent of children aged 0-23 months with diarrhea in the last two weeks who received ORS and/or recommended home fluids	**16**	**60**
Percent of children aged 0-23 who received breastfed same amount or more during diarrhea in last two weeks.	**62**	**95**
Percent of children aged 0-23 months with diarrhea in the last two weeks who were offered the same amount or more drink / fluid during the illness	**24**	**93**
Percent of children aged 0-23 months with diarrhea in the last two weeks who were offered the same amount or more food during the illness	**27**	**95**
Percent of children aged 0-23 months with diarrhea in the last two weeks whose mothers Sought outside advice or treatment for the illness	**76**	**91**
Percent of mothers who can correctly prepare ORS	**34**	**84**
Percent of mothers who usually wash their hands with soap or ash before food preparation.	**23**	**92**

Indicator/Definition	Baseline LQAS **Oct 01**	LQAS **Jun 06**
Percent of mothers who usually wash their hands with soap or ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated.	**5**	**78**
ACUTE RESPIRATORY INFECTION IDICATOR		
Percent of children aged 0-23 months with cough and fast/difficult breathing in the last two weeks who were taken to a health facility or received treatment.	**79**	**80**
PRENATAL CARE INDICATORS		
Percent of mothers with a maternal card (Card-confirmed) for the youngest child less than 12 months of age	**17**	**65**
Percent of mothers who received at least **TWO** tetanus toxoid injections (Card confirmed) before the birth of the youngest child less than 12 months of age.	**13**	**63**
Percent of mothers who had at least **ONE** prenatal visit prior to the birth of her youngest child less than 12 months of age	**45**	**78**
Percent of mothers who received /brought iron supplements while pregnant with the youngest child less than 12 months of age.	**36**	**93**
PLACE OF DELIVERY AND DELIVERY ATTENDED		
Percent of children aged 0-11 months whose delivery was attended by a skilled health personal up to TBA level	**32**	**77**
Percent of children aged 0-11 months whose delivery was attended by a skilled health personal up to MCHW level		**42**
Percent of children aged 0-11 months whose delivery involved use of a clean birth kit or whose cord was cut with a new razor	**96**	
Percent of children aged 0-11 months whose delivery involved use of a clean birth kit		**75**
Percent of children aged 0-11 months who were immediately breastfed with the mother immediately after birth.	**2**	
Percent of children aged 0-11 months who were placed with the mother immediately after birth	**25**	**82**
POSTPARTUM CARE		
Percent of mother who had at least **ONE** postpartum check-up	**11**	**63**
Percent of mothers able to report at least **TWO** known maternal danger signs during the postpartum period	**41**	
Percent of mothers able to report at least **THREE** known neonatal danger signs		**98**
Percent of mothers able to report at least **TWO** known neonatal danger signs	**71**	**98**
Percent of mothers who received a vitamin A dose during the first six weeks after delivery	**16**	**80**

Indicator/Definition	Baseline LQAS **Oct 01**	LQAS **Jun 06**
Percent of mothers who received at least 1 month of iron tablets during the first two months after delivery	**10**	**75**
CHILD SPACING		
Percent of non pregnant mothers who desire no more children in the next two years or are not sure, who are using a modern method of child spacing	**24**	**66**
Percent of mothers who report at least one place where she can obtain a method of child spacing	**54**	**100**
Percent of children aged 0-23 months who were born at least 24 months after the previous surviving child	**58**	**69**
Percent of children aged 0-23 months who were born at least 36 months after the previous surviving child	**12**	**14**
KNOWLEDGE OF DANGER SIGNS DURING PREGNANCY, POSTNATALLY AND FOR NEWBORN CHILD		
Percent of mothers (15-49 years) who know at least **TWO** danger signs/symptoms during pregnancy	**29**	**100**
Percent of mothers (15-49 years) who know at least **THREE** danger signs/symptoms during pregnancy	**26**	**99**
Percent of mothers who knows at least **TWO** danger signs/symptoms of after delivery	**41**	**98**
Percent of mothers who knows at least **THREE** danger signs/symptoms of after delivery	**11**	**95**
Percent of mothers who know at least **TWO** danger sign of new born	**71**	**98**
Percent of mothers who know at least **THREE** danger sign of new born	**37**	**98**
DANGER SIGNS OF PNEUMONIA AND DIARRHEA		
Percent of mothers who know at least **THREE** danger signs/ symptoms of pneumonia	**15**	**98**
Percent of mothers who know at least **THREE** danger sign of diarrhea/ dysentery	**14**	**92**
KNOWLEDGE ON HIV/AIDS/Sexually Transmitted Diseases (STDs)		
Percent of mothers who knows at least **ONE** HIV/AIDS and STD transmission (MOT)	**14**	**68**
Percent of mothers who knows at least **ONE** HIV/AIDS and STD prevention (MOT)	**14**	**69**

h. Sharing results and utilizing data

Using LQAS methodology, decision-making involves the analysis of results according to SAs. Before each survey, project staff together with MOH will determine the threshold according to reasonable expected progress towards the objectives. This threshold and the sample size (19 per SA) determine the decision rule, which is the number by which a SA is identified as having failed to reach the standard. The LIBON baseline sample size was 247 for Parsa (13 SAs x 19) and 285 for Sunsari (15 SAs x 19), for a total of 532 samples. As per LQAS methodology, a

sample size of 95 is sufficient for statistical significance. The sample population for the LIBON baseline was women of children 0-5 months. It is important to note that this sample eliminates women who may have miscarried, delivered stillbirths, or delivered babies that died over the previous 6 month period, resulting in a bias toward the surviving newborn.

Based on the SA level of information that LQAS provides, LIBON project management and partners will be able to identify problems and modify project strategies as needed during their annual results workshops in each district, where the information will be presented and discussed. For example, if one SA's mothers have consistently low exclusive breastfeeding, it demonstrates that more needs to be done in breastfeeding education and support in that SA. Furthermore, if the majority of health workers are not performing at the standard for a certain task, it may indicate that their training was not effective and needs to be repeated and/or revised.

In addition to LQAS data and annual results reviews at the district level, data from community data collection and MoHP service statistics will be presented and discussed in regular review meetings with DDC members, DHO staff, and project staff. The review meetings will provide a forum in which to advocate for increased allocation of resources for health at the district level and for improving and modifying current health strategies (outreach services, supervision, etc.). Building on the successful experience of the CS XVII in Bara District, LIBON will support monthly review meetings at health posts and primary health centers to share data and discuss opportunities as well as challenges and solutions. FCHVs and CHWs will represent needs identified and expressed during PWG meetings through their participation in monthly ward level review meetings. This information will be brought to the sub health post level review meetings. Similarly, sub health posts will participate in the health post review meetings and will represent the messages received from the local/ward level health facilities. In Bara, review meetings took place from the 4th to the 6th of each month allowing the DHO staff to participate in all of the meetings over the three day period, thus ensuring that the community level data and local concerns were shared at the district level. At these meetings, community data boards demonstrate LIBON project indicators and other monthly targets and results of interest to communities, and served as a visual aid to stimulate discussion of targets and results on a monthly basis.

At national level, results will be shared during monthly coordination meetings with CARE, NFHP, and USAID. Quarterly meetings of the National Neonatal Technical Working Group will provide an additional information-sharing platform. Technical papers and newsletters will be presented and/or published by LIBON/IOM partners. Partners have discussed the possibility of forming a steering committee for maternal and neonatal mortality surveillance through which each partner will share data on maternal and neonatal deaths as collected through community groups in their project areas. Mortality surveillance through Pregnant Women's Groups is yet another innovative strategy that is being modified and adopted based on its success in the Bara project.

i. Operations research

LIBON plans to conduct a small operations research activity as a contribution to the roll out of the CB-NCP in Nepal. Input from national level stakeholders together with local level demand for an OR activity will determine the focus of the anticipated activity. Please see Section 2 for more information.

j. Consistency of LIBON Goal and Results with USAID/Nepal's Strategy & CSHGP

Table 9. LIBON Alignment with USAID CSHGP

CSHGP Performance Monitoring Plan (PMP)	LIBON Project Activities
PR1: Improved Health Status of Vulnerable Target Populations PR1.1: Increased knowledge and improved health practices and coverage related to key health problems and interventions PR1.2: Improved quality and accessibility of key health services at health facilities and within communities PR1.3: Increased capacity of communities, local governments and local partners to effectively address local health needs	LIBON will improve household behavior and the management of neonatal illness using the MINI model LIBON will build the capacity of the district health staff at all levels to provide health services. LIBON's project strategy will emphasize behavior change communication via Pregnant Women Groups, community mobilization, and linkages between facilities and communities to deliver information and services on LIBON's technical interventions.
PR2: Increased Scale of Health Interventions PR2.1: Increased population reached through the use of strategic partnerships and networks PR2.2: Improved health systems and policies that support effective health programs and services at the national level	LIBON will support an expanded range of MNC activities as well as an improved HMIS, comprised of community-based health information sub-system providing information to communities and health facilities. The HMIS, sustained through the DHMT, will monitor health behaviors through the application of a household survey using LQAS.
PR3: Increased contribution of CSHGP to the global capacity and leadership for child survival and health PR3.1: Increased technical excellence PR3.2: Improved recognition and visibility of PVO work in health PR3.3: Increased capacity of new partners of CSHGP to implement effective health programs	LIBON's model will encourage community participation by increasing community representation through the VDC, HFMCs and PWGs. The needs of families and households will be more pronounced within the health sector as FCHVs and TBAs will represent community needs to health staff at higher levels. Also the IOM and the Division of Child Health will build capacity in state of the art MNC programming that will benefit other regions.

The following report format (**Table 10**) will be used to report to USAID/Nepal on output (OP) indicators on an annual basis. This report will be submitted to USAID/Nepal as a part of the LIBON annual report.

Table 10. Alignment of LIBON's Activities with USAID/Nepal Priorities

USAID/Nepal OP Indicators	District			Total	Remarks
	Sunsari	Parsa	Bara		
1. Number of postpartum visit within 3 days of birth in USG assisted program (only from CB-MNC districts Jhapa, Morang, Banke, Kanchanpur)					Data after implementation CB-NCP
2. Number of people trained in maternal/newborn health through USG supported program					Data after implementation CB-NCP
3. Number of people trained in child health and nutrition through USG supported health area program					Data after implementation CB-NCP
4. Number of new born receiving antibiotic treatment for infection from appropriate health workers through USG supported programs					Data after implementation CB-NCP
5. Number of cases of child pneumonia treated with antibiotics by trained facility or community health workers in USG supported program					Data from HMIS – IMCI report of DHO
6. Number of children 6 months to 5 years of age who received vitamin A from USG supported programs					Data from NID program report of DHO
7a. Number of USHG assisted service delivery points (average quarterly stock outs of number of service delivery points) experiencing stock-outs of specific tracer drugs (**ORS**), vitamin A, Cotrim P, Iron)					Data from quarterly report of LMIS from DHO
7b. Stock outs (**Vitamin A**)					
7c. Stock outs (**Cotrim P**)					
7d. Stock outs (**Iron**)					

k. Evaluation plan

The project will follow the current USAID guidelines for both the Mid-term and Final Evaluations. Due to the phase-in approach that LIBON is taking in terms of beginning in Sunsari in Year 1 and scaling out to Parsa in Year 2, the CSSA workshop and framework development will take place as part of the phase-in process for Year 2 activities in Parsa, in July and August 2008. Based on the need to cover three districts as well as the need to coordinate the availability of IOM faculty and students, the Mid-term evaluation will be carried out over a period of 4 months from May through August of 2009. The final evaluation will be carried out from May to August of 2011.

Table 11. Timeline for Baseline, Mid-term and Final Evaluation

	Tools/ District	Sunsari	Parsa	Bara
Baseline	Reporting date	11-Apr-08		
	LQAS	Jan-08	Feb-08	N/A
	CSSA	Apr-08	July and Aug 2008	
	Qualitative Evaluation	N/A		
	Workshop/Sharing	March 2008		
Mid-term Evaluation	Reporting date	31-Oct-09		
	LQAS	May - Jul 2009	May - Jul 2009	Jun - Aug 2009
	CSSA			
	Qualitative Evaluation	Aug 2009		
	Workshop/Sharing	Aug - Sep 2009		
3rd Year Annual Report	Reporting date	31-Oct-10		
	LQAS	May - Jul 2010		
Final Evaluation	Reporting date	28-Dec-11		
	LQAS	May - Jul 2011	May - Jul 2011	Jun - Aug 2011
	CSSA			
	Qualitative Evaluation	Aug 2011		
	Workshop/Sharing	Aug 2011		

4. Program Management

a. Management structure

The intent of this project is to reduce neonatal mortality and increase effectiveness of sustainable management approaches within the local health system (VDC) as well as District health and development system (DHO and DDC). This requires that the project staff work closely with communities, MoHP health structures and local NGOs to ensure that these key stakeholders are capable of continuing services and activities once the project finishes. Various levels of

personnel will support project activities. The core LIBON management staff includes the LIBON Project Coordinator, the Plan Nepal Health Coordinator, the LIBON Administrative/Finance Officer, and the Monitoring and Evaluation Officer. Three district teams in Bara, Sunsari and Parsa will manage day to day activities in the field in coordination with the staff mentioned above. This core group is supported technically and managerially by Plan Nepal's Country Office in Katmandu as well as Plan Nepal's established Program Unit Offices in Birgunj and Sunsari. The LIBON project will also receive technical, management and administrative backstopping from Plan Nepal's HQ office in Washington DC, Plan USA. The Plan USA personnel are the link between Plan and the USAID CSHGP team.

The management structure of the project will enable participatory management of all stakeholders while maintaining distinct roles and responsibilities for each individual and organization. Daily planning and decision making will occur at the field level to enable local level decision making. However, overall work will be supported by project management and reviewed during regular communication including monthly staff meetings. Higher-level management at Plan will receive information from monthly and quarterly reports and hold regular coordination meetings to discuss project progress and concerns.

A LIBON project Steering Committee consisting of national level stakeholders will likewise review progress and activities on a quarterly to semi-annual basis. Committee members include Plan's Country Director, the Director of Family Health at the MoHP, the Director of Child Health at the MoHP, and the Dean of the Institute of Medicine. The LIBON Coordinator participates in Steering Committee meetings to update members on project activities and progress but will not be a voting member. The project Steering Committee will meet every three to six months in Kathmandu to approve the DIP, the Annual Report, and the Annual Operation Plan. It will assess project progress, endorse new technical interventions, provide institutional support, and participate in LIBON's policy level activities (Result 4). For the Mid-Term and Final evaluations, the Steering Committee will provide advice on and approval of the external consultants' scope of work and progress.

Organizational Structure

As indicated above, Plan will implement LIBON through one national team headquartered at its Country Office in Kathmandu and three district teams for each of Bara, Sunsari and Parsa. The Plan HQ backstop will provide technical support to the LIBON's operations. The LIBON organizational chart is included in **Annex 10**. Job descriptions and resumes for key staff are available in **Annex 11**.

The Kathmandu-based Central LIBON Team is led by the LIBON Project Coordinator (Bagawan Das Shrestha, MPH), a full-time position that is supervised by Plan Nepal's Country Director.[30] He also coordinates LIBON's interactions with Kathmandu-based stakeholders, including USAID and the LIBON Steering Committee. Mr. Bhagawan Das Shrestha will oversee district level implementation and provide support and technical assistance to district teams as necessary. The Plan Health Coordinator, Mr. Sher Bahadur Rana (MPH, MS), will also support national

[30] Mr. Shrestha's nomination as LIBON Project Coordinator was approved by USAID in November 2007. This approval was communicated to Plan USA via e-mail from Cognizant Technical Officer Jill Boezwinkle (GH/HIDN/NUT) on November 21, 2007.

level interactions, especially when the Project Coordinator is in the field. Mr. Rana will also serve as the principle actor responsible to ensure LIBON Result 4, Strengthened Support for NNM Reduction in Nepal. This will be accomplished through ensuring that LIBON project information is disseminated and considered in Kathmandu at the national policy level. The Health Coordinator also reports to the Country Director. The full time Monitoring and Evaluation Officer (Mr. Dipak Dahal) manages the monitoring and evaluation activities, including the baseline assessments, the Annual Reviews (District/Regional), the midterm and final evaluations, and the Annual Reports to USAID. Mr. Dahal reports to the Project Coordinator. These positions are supported by a full-time Administrative and Financial Assistant who likewise reports to the Project Coordinator.

LIBON district level teams are based in the district capitals. The timing of deployment depends on the location due to the phase out strategy that the project is employing (please see Table 13 below). Each district team will be administratively supervised by Plan's District Manager (a line function in Plan Nepal's existing country structure) with technical supervision provided by the LIBON Project Coordinator. Each district team will be led by a LIBON District Coordinator who will manage the relationships with the district stakeholders (MoHP, DDC, RHCC). Given the integration of Plan's regular health programs with LIBON, Plan will allocate 50% of the time of its existing District Health Coordinators (a line position within Plan Nepal's existing country structure) to fulfill this LIBON function. Having the district coordinators fulfill a dual role in their respective district is intended to facilitate internal coordination and ensure consistent dialogue with district stakeholders. To maximize efficiencies and sharing and learning, the District Coordinator for Bara will also serve as the Coordinator for Parsa as these districts are close to each other. The LIBON District Coordinators will be supported by and will supervise LIBON Assistant District Coordinators (1 per district). These are full-time positions will have the responsibility to support capacity building activities at the district level as well as to provide supervision and support to LIBON Facilitators. LIBON Assistant District Coordinators are either professional community nurses or college graduates with relevant experience. In each district, full time Facilitators (see below for number per district) are responsible for developing the field program in the priority sub-districts. Facilitators' qualifications are equivalent to semi-professional community extension workers, with a minimum of 2 years post-high school education. All staff have at least 3 years of experience working in community-based health or social development programs in rural Nepal.

Table 12 describes the quantity and timing of staff assigned to each district.

Table 12. Human Resources

District	Bara	Sunsari	Parsa
District role in LIBON project	Learning and training site for community-based strategies for Sunsari and Parsa. Active in the first 3 years.	Main site of LIBON's field program. Active during the 4 years.	Replication site of LIBON field program. Preliminary work in year 1 but with full field program beginning in year 2.
Number of District Coordinators	District Coordinator split with Parsa (half-time in Bara)	1 (half-time)	District Coordinator split with Bara (half-time in Parsa)

Number of District Assistant Coordinators	1 (full-time)	1 (full-time)	1 (full-time) beginning in year 1
Number of Facilitators	2 full-time for first year -1 will transfer to Parsa in second year	4 full-time during all 4 years	2 full-time beginning in year 1, and 4 full-time beginning in year 2
Number of Office Assistants	None	1 full time	1 full time beginning in year 2

Because the district teams are much smaller than the Bara CS XVII project district teams, which had a staff of 30 (compared with LIBON's 6.5 per district plus 2-3 core staff), the project will subcontract some of the community training, coaching and BCC activities to local NGOs in the project districts. Plan has a rigorous process for selecting local NGOs that can support its activities and local NGOs are selected only after passing through this process. For the health area, the NGOs selected to work with Plan programs in Bara include: the Integrated Mother and Child Health Organization. Many individuals who staffed the previous CS XVII project in Bara are currently working with IMCHO and are therefore they are well prepared to support the community health needs of the LIBON project. They understand how to educate and mobilize communities and the health services around the project objectives and according to the project community mobilization methodologies. Although Bara is not implementing the CB-NCP, it is a model for the other two districts and will focus on sustaining the CS activities including MNC and PWGs, which were implemented during the previous project. In addition, due to political problems since September of 2007, government activities including health services have been frozen in Bara and there has been considerable disruption of services. For this reason the LIBON project, which originally only intended to have one facilitator operating in the district to follow-up on health services, will now be placing another facilitator in the district during year 1 to help the District Health Office get outreach services back on track. IMCHO will be helpful with this process as will the CWC, which was also an NGO partner during Plan's previous CS project in Bara. CWC helped with much of the organization of PWGs and community education activities. It is anticipated that IMCHO and CWC will support training of local NGOs chosen to work in the new project districts, Sunsari and Parsa, to strengthen community activities. NGOs local to each district will be chosen as opposed to expanding the reach of NGOs from Bara in an attempt to make the project as sustainable as possible by building local capacity. The new Sunsari NGOs that have been selected by Plan are the Resource Center for Sustainable Development and Ramgun's Youth Club. The NGOs for Parsa have not been selected yet but after local NGO partners are selected IMCHO and CWC will be able to help bring them up to speed quickly with the project, especially since Parsa is so close to Bara (where IMCHO and CWC are located).

b. Technical assistance and training

Outside technical assistance was used for developing the DIP. External consultants will also be contracted for the mid-term and final evaluations. The headquarters backstop staff will assist with implementation and monitoring of LQAS and the CSSA during regularly scheduled visits. The backstop staff will also assist with coordination with USAID such as with USAID/Global Health's Maternal and Newborn Care Office. Plan HQ staff will support the planned operations

research activity, and external assistance may be called upon for this activity as well. Currently, it is envisioned that the NFHP II will support the development of the study. Plan will continue to work with CSTS+ and participate in workshops in order to receive state-of-the-art training in CS topics. The core staff will receive updated training on project management, monitoring and evaluation and sustainable change topics.

c. Project supervision

Project activities are supervised by the Project Coordinator through monthly meetings held with all project staff. Each staff member reports on his area or responsibility. He/she brings with them the health facility data compiled in monthly meetings at the sub-district level and community census data compiled by FCHVs from the sub-districts covered by each field staff. These data are presented at the monthly meetings along with discussions of problems and follow-up steps. In addition, the Project Coordinator makes regular field visits with the LIBON District and Assistant District Coordinators (and DHO staff) to review progress in the sub-districts.

d. Headquarter's support

Technical and Managerial Backstopping

The project will receive technical and managerial backstopping from Plan USA's International Programs Team. Technical backstop will be provided by Paige Best, Plan USA's HIV and Health Advisor. Ms. Best will dedicate .25 FTE to technical backstopping the LIBON project. Ms. Best's CV is included in Annex 9. Managerial and administrative backstopping support will also be provided by Plan USA's Program Officer for Asia, who will dedicate approximately 10% of his time to the project. Between them, Plan USA's HIV and Health Advisor and Program Development Officer for Asia will make backstopping visits annually to the LIBON project.

Financial Backstopping

Plan demonstrates substantial financial management capacity through the management of more than $400 million in program funds annually. Exclusive of LIBON, Plan USA has implemented 21 separate CSHGP projects since 1986, managing more than $27,292,716 in total project funding (including more than $18.75 million in USAID grant funding).

Plan USA's Program Finance Officer will provide financial training and backstopping support to LIBON's Financial and Administrative Officer and relevant Plan Nepal Finance staff. S/he will also work with Plan USA's LIBON technical and managerial backstoppers on any necessary budget modification requests to USAID. Plan USA's Grants and Contracts Compliance team will receive all field financial reporting for review and presentation to USAID. Between them, Plan USA's Program Financial Officer and Grants and Contracts Compliance Director/Officer will undertake financial compliance backstopping visits in Year 1 (training grant finance staff during DIP preparation), Year 3 (at time of Mid-Term Evaluation) and Year 4 (to assist with financial close-out).

ANNEXES

Annex 1: Response to Application Debriefing

Annex 2: Response to Final Evaluation Recommendations

Annex 3: Description of DIP Preparation Process

Annex 4: Map of Project Area

Annex 5: CS XVII Bara Final Evaluation

Annex 6: KPC Baseline Survey (Sunsari and Para) and Health Facility Assessment (Sunsari)

Annex 7: Caste/Ethnic Groupings

Annex 8: Pregnant Women's Group Strategy

Annex 9: Agreements

Annex 10: Plan LIBON Organizational Chart

Annex 11: Resumes/CVs and Job Descriptions of Key Personnel

ATTACHMENTS

Attachment A: Epidemiological and Population Statistics and Health Facilities and Staffing by District

Attachment B: FCHV Incentives to Implement CB-NCP according to MoHP: Currently Unfunded

Annex 1: Response to Application Debriefing

External Reviewer Comment:

- *The neonatal sub-goal is appropriate. Programming to this sub-goal is effective. The program strategy and interventions for sub-goals 2 and 3 will need further definition.*

Plan Response:

The LIBON project's overall goal, as well as sub-goals 2 and 3 have been substantially revised as follows[31]:

Overall Project Goal: To assist the Government of Nepal's efforts to sustainably reduce neonatal mortality in Nepal.

- **Sub-Goal 2: Increased social inclusion and improved quality of child, maternal, and neonatal health through a fact-based decision making process for the planning and resource allocation of district-based programs.**
- **Sub-Goal 3: Increased capacity of the MoHP and other constituencies in the formulation of policy and implementation of programs that will accelerate the reduction of neonatal mortality in Nepal.**

These changes are intended to more accurately reflect the project's focus on partnership with the Government of Nepal to advance its institutional efforts to reduce neonatal mortality nationally. Sub-goal 2 has been broadened to reflect the improvement of quality in GON Maternal and Child Health services through greater inclusion and access. Sub-goal 3 has been re-stated to more clearly reflect the focus on increasing MOHP and other government providers' abilities to reduce neonatal mortality in Nepal.

The program strategy and interventions for the revised sub-goals are detailed in Section 2 ("Program Description"). Objectives, indicators, and targets for these sub-goals are included in Section 3 ("Program Monitoring and Evaluation Plan").

External Reviewer Comment:

- *These two districts have not been affected significantly by Maoist activity, and therefore neonatal rates could be higher in other areas. Plan's proposal to use Sunsari and Parsa as potential "laboratories" for demonstrating MOH capacity building and improvement in neonatal outcomes is well articulated, but the reviewers did note the easier access.*

Plan Response:

Though some other areas of Nepal have been more seriously affected by the Maoist insurgency, the selected districts have faced instability, strikes, and violence from regional or ethnic-based armed groups active in the Terai. As a result of threats and extortion attempts against staff, Plan had to suspend its operations in Bara from late September 2007 through January 2008. Hopefully, the April Constituent Assembly elections will pave the way for improved security in the Terai and throughout Nepal.

The debriefing package summary score sheet and full external review comments are included on the following pages.

[31] Sub-Goal 1 ("Reduced neonatal mortality in the districts of Sunsari and Parsa through the application of an integrated, community-based package of interventions and service delivery strategies that include the MINI and the chlorhexidine field trials") remains unchanged.

Copy of Summary Score Sheet from Application Debriefing

GH/HIDN Child Survival and Health Grants Program
Debriefing Summary Sheet
FY 2007

Applicant: Plan
Country: Nepal
Category: Standard

Categories	Entry	Standard	TB
Number reviewed		28	
Number funded		5	
Highest score		97.20	
Lowest score		52.00	
PVO App. Rank		3	
PVO App. Score		94.63	

Copy of External Reviewer Comments from Application Debriefing

Plan Nepal Summary Feedback

- The neonatal sub-goal is appropriate. Programming to this sub-goal is effective. The program strategy and interventions for sub-goals 2 and 3 will need further definition.
- These two districts have not been affected significantly by Maoist activity, and therefore neonatal rates could be higher in other areas. Plan's proposal to use Sunsari and Parsa as potential "laboratories" for demonstrating MOH capacity building and improvement in neonatal outcomes is well articulated, but the reviewers did note the easier access.
- PLAN proposes to build on their successful model of using pregnant women's groups (PWGs). In a country where over 80% of women still give birth without any skilled assistance, PLAN has used this innovative model to dramatically increase the percentage of women giving birth with skilled assistance.
- The proposal to build upon the learning of the application of the CSSA at the Mission level by applying the tool and building the capacity of district MOH partners to use it on a routine basis, for planning and monitoring sustainability, is interesting. Also of note are plans to institutionalize the use of LQAS with district level MOH staff as a routine tool for management and measurement.
- The strong link proposed with the Institute of Medicine is exciting.
- Plan's proposal to work with the MOH to build capacity and help create and strengthen the health system and policies is strong. Using peer support mechanisms, phasing in the approach, working through FCHVs, are all strong approaches to improve neonatal health outcomes.

Annex 2: Response to Final Evaluation Recommendations

This is not applicable. The LIBON project will focus implementation in the new areas of Sunsari and Parsa. Bara, the focus area of Plan's CS XVII project, will serve primarily as a laboratory of sustainability.

Annex 3: Description of DIP Preparation Process

The DIP preparation team met in Kathmandu, Nepal, at the Plan Nepal office between March 4 and March 18, 2008. Two Plan headquarters staff and the consultant arrived on March 3 and March 6, respectively. The Plan USA finance officer arrived on March 7 and spent the next 10 days reviewing the budget with appropriate country office staff and training the office assistants for the field offices. All meetings were held in Kathmandu. Besides these participants from outside of Nepal, Plan's core staff also participated in the DIP process. These included the Project Coordinator, the Plan Nepal Health Coordinator, and the LIBON Monitoring and Evaluation Officer. Because of political turmoil in the project districts, Plan asked the district and regional health officials of the project areas to meet with the DIP team in Kathmandu. Meetings were held with each district and regional team on separate days during the second week of DIP planning. During the first week, meetings were held with the directors of the Child Health Division and the Family Health Division of the Ministry of Health and Population to obtain their input and perspective regarding the LIBON project and its role vis-à-vis the national Community-Based Newborn Care Package (CB-NCP) initiative. The DIP team also met with the USAID/Nepal-funded Nepal Family Health Program II which will be taking an important role in helping the government implement its CB-NCP program in Nepal. The team also met with the CARE CS Project Coordinator, who is also completing the DIP for a new CS project. CARE, Plan, and NFHP are planning to coordinate closely on their complementary Maternal and Newborn Care (MNC) and CB-NCP activities. The DIP team met with USAID/Nepal's Child Health Coordinator and discussed concerns about timely implementation of the CB-NCP as well as USAID's efforts to coordinate all US-funded health activities in Nepal. During the second week, after meeting with the three district and regional teams, the DIP team also met with the Institute of Medicine faculty of Tribhuvan University to more explicitly define their role in the LIBON project. The DIP team also met with MIRA, a USAID-funded NGO that will be coordinating workshops and other efforts to share results and experiences of organizations engaged in maternal and neonatal health.

During the first week, the DIP team met and reviewed preliminary findings from the baseline KPC and RHFA survey findings (see discussion in DIP for details) in order to analyze the situation and agree on the direction of the project. During the second week, the survey findings were presented to each district team during the district-specific meetings. The survey results were compared with the MoHP service statistics that the DHO staff had and discussions were held in regard to the need to target underserved VDCs as well as those composed of marginalized populations. In the afternoons, the DHO teams set targets based on the baseline results, reviewed project strategies, and developed district work plans with the project staff.

At the end of the in-country planning exercise, the DIP team met with Plan Nepal's senior management to discuss the status and direction of the DIP. The Country Director reiterated Plan's support for the project both from the national as well as the relevant field offices and reiterated Plan's interest in working with the CS project. He commented on Plan's experience of adapting lessons learned and best practices from the previous project to all of Plan's Program Units (field offices) in Nepal.

Please find below a list of individuals that participated in the DIP as well as a list of the DIP planning activities.

Participant list during preparation of DIP of LIBON project

SN	Name	Position	Organization	Government/ Partner
1	Dr. Y. V. Pradhan	Director	CHD	Government
2	Dr. Balkrishna Subedi	Director	FHD	Government
3	Dr. Naresh Pratap KC	Regional Director	Eastern RHD, Dhankuta	Government
4	Arun Kumar Mahato	Sr. Public Health Officer	Central RHD, Hetauda	Government
5	Ram Dhan Meheta	PHA	DHO Sunsari	Government
6	Shiv Narayan Yadav	IMCI focal person	DHO Sunsari	Government
7	Prakash Adhikari	HMIS focal person	DHO Sunsari	Government
8	Ram Charita Mehata	Health Assistant	DHO Sunsari	Government
9	Yogendra Pd. Bhagat	Public Health Administrator	DHO Parsa	Government
10	Prem Chandra Jaiswal	IMCI focal person	DHO Parsa	Government
11	Sachindananda Singh	EPI officer	DHO Parsa	Government
12	Dharmaraj Bahadur Thapa	Program Officer	DDC Parsa	Government
13	Amleshwor Mishra	PHI	DHO Bara	Government
14	Dr. Abdul Rahman	DHO	DHO Bara	Government
15	Sabitri Shrestha	FCHV	Nijgadh - 9, Bara	Government
16	Siladevi Timilshina	FCHV	Dumarwana - 7, Bara	Government
17	D. P. Raman	PSM	USAID	USAID
18	Dr. Steve Hodgins	Director	NFHP	INGO
19	Dr. Kedar Baral	Director, Reproductive Health	NFHP	INGO
20	Deepak Paudel	M&E Manager	Care Nepal	INGO
21	Ramjee Prasad Pathak	Associate Professor and LIBON Focal Person	Institute of Medicine	IOM
22	Frank Manfredi	Program Officer for Asia	Plan USNO	Plan USNO
23	Lisa Bowen	Reproductive Health Advisor	Plan USNO	Plan USNO
24	Carole Andre	Program Financial Officer	Plan USNO	Plan USNO
25	Sandra Wilcox	Consultant	---	---
26	Prem Shukla	Country Director	Plan Nepal	Plan Nepal
27	Sher Bahadur Rana	Health Coordinator	Plan Nepal	Plan Nepal
28	Bhagawan Das Shrestha	Project Coordinator - LIBON	Plan Nepal	Plan Nepal
29	Deoratna Chaudhary	District LIBON Coordinator	Plan Nepal	Plan Nepal
30	Krishna Bdr. Achhami	Asst District LIBON Coordinator	Plan Nepal	Plan Nepal
31	Kalawati Changbang	Health Program Coordinator	Plan Nepal	Plan Nepal
32	Hari Dev Shah	Asst District LIBON Coordinator	Plan Nepal	Plan Nepal
33	Anju Rajkarnikar	Grant Accountant	Plan Nepal	Plan Nepal
34	Dipak Dahal	M&E Officer	Plan Nepal	Plan Nepal

Plan Nepal
Schedule for DIP Preparation of LIBON project
(March 3-16, 2008)

Date	Day	Particulars	Participants	Support	Remarks
3-Mar-08	M	Arrival - Lisa and Frank		Airport pick up Jet Airways, 9W 0264 arriving KTM at 10:15am and hotel booking at Everest Hotel	
4-Mar-08	Tu	Meeting with LIBON team	CD+PSM+SGSM+Grants Coordinators (one hour) HC+PC-LIBON + M&E Officer +Assistant and District LIBON Coordinators Bara/Parsa and Sunsari = 8 persons	need cookies, tea and packed lunch for 12 persons for March 3, 4, and 5, 2008	Venue: Plan Nepal KTM meeting hall
5-Mar-08	W	DO + NFHP MOU	HC+PC-LIBON + M&E Officer +Assistant and District LIBON Coordinators Bara/Parsa and Sunsari = 8 persons		Venue: Plan Nepal KTM meeting hall
6-Mar-08	Th	Shivaratri Holiday + Meeting with LIBON team continue + **arrival of Sandy by JET Airways, 9W 0262 arriving KTM at 2:45 pm**	DO	Airport pick up and hotel booking at Everest Hotel for Sandy	subject to confirm-ation
7-Mar-08	F	1 to 1 interview with NFHP + arrival of Carole by Jet Airways, 9W 0264 arriving KTM at 08.30am	CHD and Family Health (11am -1pm) and NFHP + Care 8 persons afternoon (2-5pm)	Airport pick up and hotel booking at Everest Hotel for Carole + need cookies, tea and lunch packed for 8 persons	Venue: CHD Teku and Plan Nepal KTM meeting hall
March 7-15, 2008		Financial part with Carole	Niranjan Dixit and Anju		
8-Mar-08	Sa	Weekend	Meeting with LIBON team	need cookies, tea and packed lunch for 11 persons	Venue: Plan Nepal KTM

Date	Day	Particulars	Participants	Support	Remarks
					meeting hall
9-Mar-08	Su	Weekend	Meeting with LIBON team	need cookies, tea and packed lunch for 11 persons	Venue: Plan Nepal KTM meeting hall
10-Mar-08	M	1 to 1 interview with DHO Sunsari	DHO and IMCI focal person Sunsari, Planning section and others = 4	need cookies, tea and packed lunch for 11 persons	Venue: Plan Nepal KTM meeting hall
11-Mar-08	Tu	1 to 1 interview with DHO Parsa	DHO and IMCI focal person Planning section and others Parsa = 4 and FHD at 4:30 pm.	need cookies, tea and packed lunch for 11 persons	Venue: Plan Nepal KTM meeting hall
12-Mar-08	W	1 to 1 interview with DHO Bara	DHO and IMCI focal person Bara = 2 + FCHV 2 (Bara) + Raman USAID at 3 p.m.	need cookies, tea and packed lunch for 11 persons	Venue: Plan Nepal KTM meeting hall
13-Mar-08	Th	1 to 1 interview with IOM	IOM 4 persons at IOM Maharajgunj from 11 a.m.	need cookies, tea and packed lunch for 11 persons	Venue: Plan Nepal KTM meeting hall
14-Mar-08	F	Synthesis meeting	HC+PC-LIBON + M&E Officer + others	need cookies, tea and packed lunch for 8 persons	Venue: Plan Nepal KTM meeting hall
15-Mar-08	Sa	Draft DIP	CD + PSM + SGSM + Grants Coordinator + HC + PC-LIBON + M&E Officer	need cookies, tea and packed lunch for 12 persons	Venue: Plan Nepal KTM meeting hall
16-Mar-08	Su	Departure			

Annex 4: Maps of Project Areas: Sunsari, Parsa, Bara

Figure A: Map of Nepal, with LIBON Project Districts highlighted.

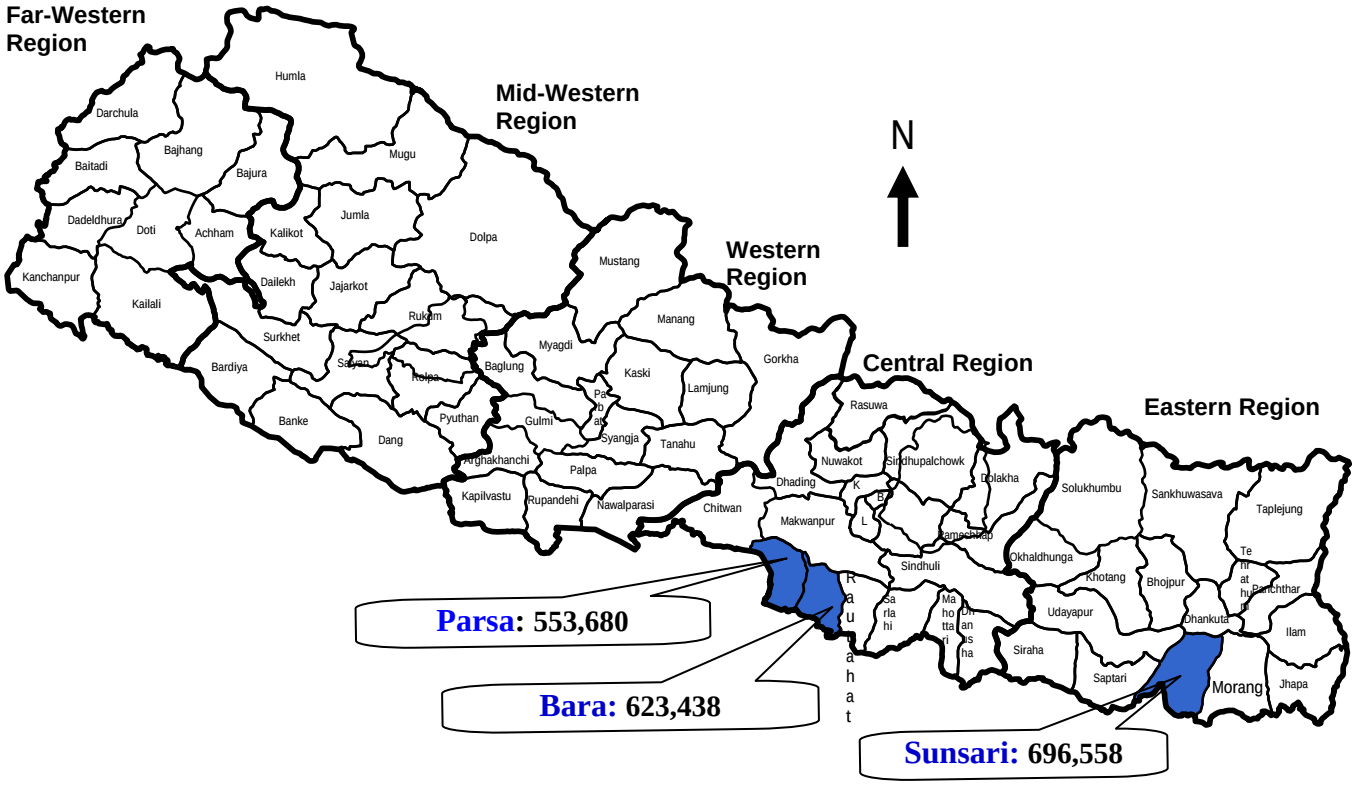


Figure B: Map of Sunsari District, with Health Facilities indicated

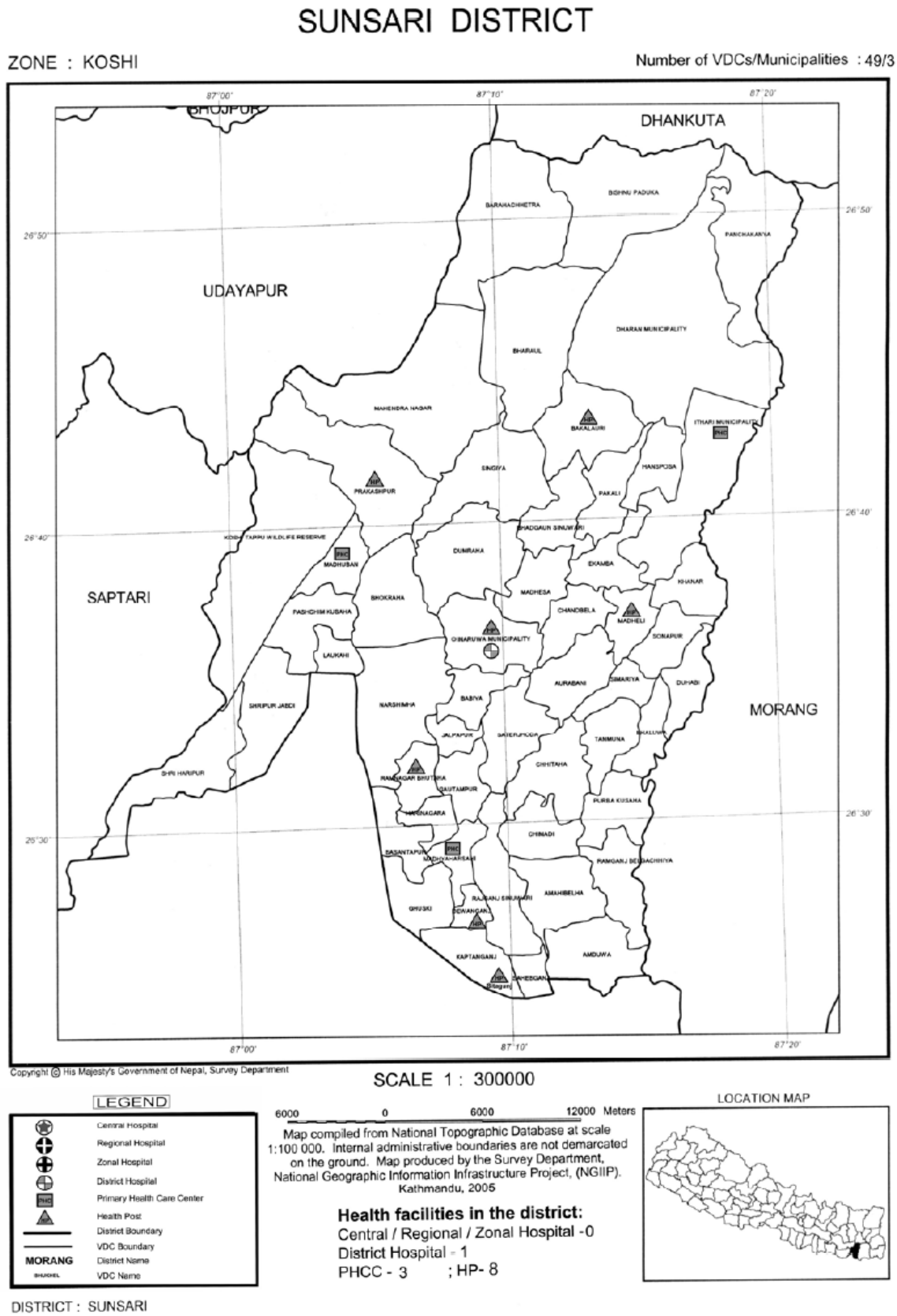


Figure C: Map of Parsa District, with Health Facilities indicated

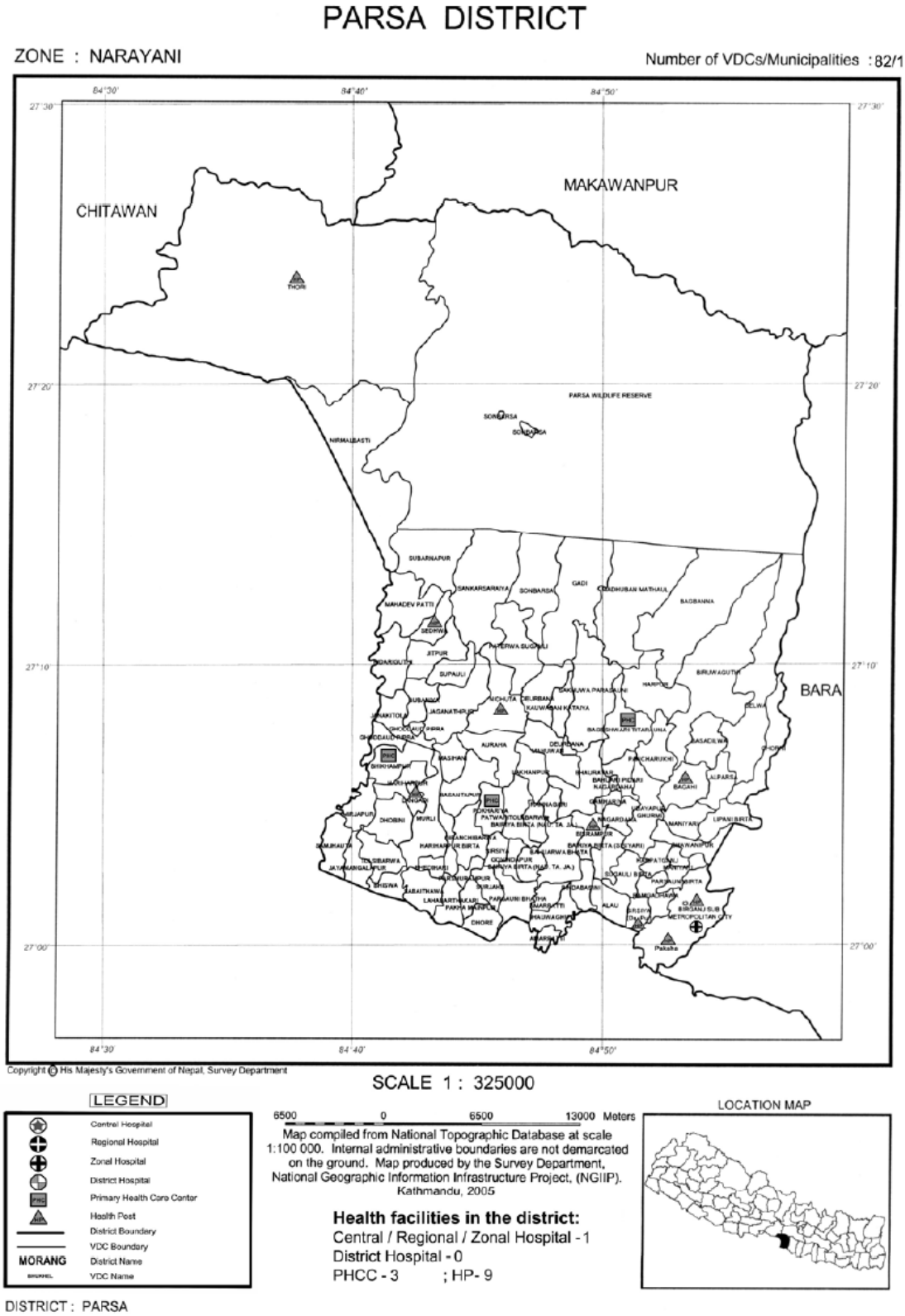
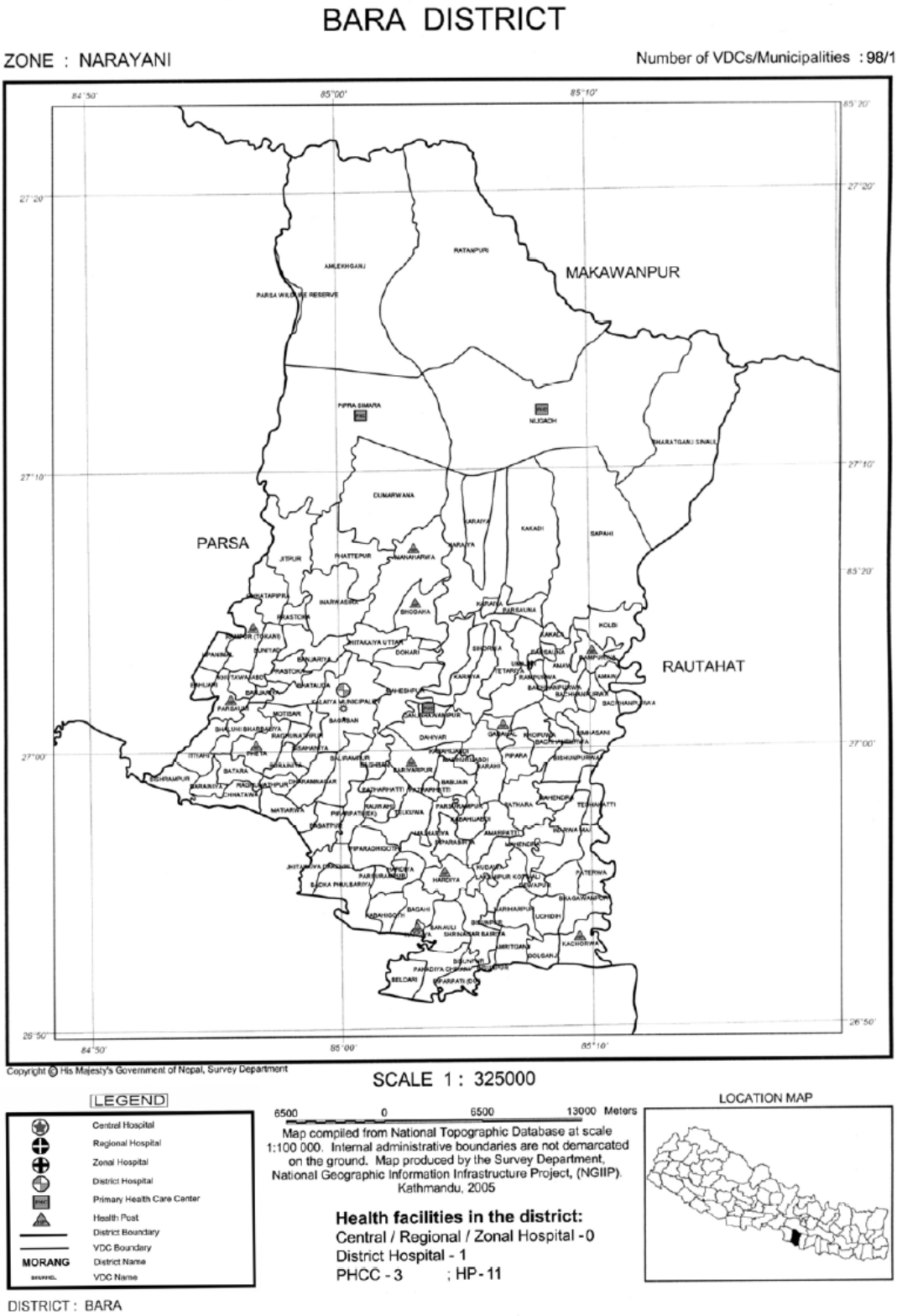


Figure D: Map of Bara District, with Health Facilities indicated



Annex 5: Baseline Assessment Reports

Annex 5: CS XVII Bara Final Evaluation

PLAN INTERNATIONAL USA Inc.
d/b/a CHILDREACH

FOR OUR MOTHERS AND CHILDREN:

Scaling Success to the District Level

PLAN Nepal Child Survival XVII Cost Extension

FAO-A-00-97-00042-00

30 September 2001 – 29 September 2006

Final Evaluation

August 2006

Submission Date: December 31, 2006

Report Prepared
By

Sandra Wilcox, Consultant

Reviewed and Edited by: Pierre-Marie Metangmo, Laban Tsuma and Plan Nepal Team

ACKNOWLEDGEMENTS

The principal author of this report would like to express her appreciation to the Plan staff who gave so generously of their time and effort to improve the situation of the women and children of Bara District in Nepal. The author is especially grateful to those who supported the FE team during the evaluation process and made the work possible. The leadership and support of Prem Shukla, Nepal Country Director, Subhakar Baidya, Program Support Manager, Dr. Chandra Kumar Sen, District Program Coordinator, Dr. Kedar Baral, Plan Nepal National Health Advisor, and Bhagawan Das Shrestha, CS Project Coordinator facilitated this work tremendously.

Additional thanks goes to those who conducted the final surveys and quantitative tools found in the FE: Kedar Baral, Bhagawan Das Shrestha, and the entire CS team. Thanks also goes to Dr. Pierre Marie Metangmo, Plan's Health Programs Coordinator, whose facilitation skills and long experience with the Nepal CS project greatly enhanced the Final Evaluation process. A special thanks also goes to Nitu Acharya for all her hard work in organizing the final evaluation workshop and the associated logistics for the evaluation activities.

LIST OF ACRONYMS

ANM	Auxiliary Nurse Midwife
ARI	Acute Respiratory Infection
BASICS	Basic Support for Institutionalizing Child Survival
BCC	Behavior Change Communication
CDD	Control of Diarrheal Disease
CDP	Community Drug Program
CG	Child Group
CHDK	Clean Home Delivery Kit
CMR	Child Mortality Rate
CPR	Contraceptive Prevalence Rate
CS	Child Survival
CSGP	Child Survival Grants Program
CSSA	Child Survival Sustainability Assessment
CSTS	Child Survival Technical Support
CWC	Community Welfare Center (NGO Partner)
CWS	Child Welfare Society (NGO partner)
DDC	District Development Committee
DHO	District Health Office
DHS	Demographic and Health Survey
DIP	Detailed Implementation Plan
EOC	Emergency Obstetric Care
EPI	Expanded Program on Immunization
FCHV	Female Community Health Volunteer
FHD	Family Health Division (MOH)
FP	Family Planning
HF	Health Facility
HFA	Health Facility Assessment
HFSC	Health Facility Support Committee
HIS	Health Information System
HMG/N	His Majesty's Government/ Nepal
HP	Health Post
IEC	Information, Education, Communication
IMCI	Integrated Management of Childhood Illness
IMR	Infant Mortality Rate
INGO	International Non-Government Organization
IUD	Intrauterine Device
JSI	John Snow International
LQAS	Lot Quality Assurance Sampling
MCHW	Maternal and Child Health Worker
MMR	Maternal Mortality Ratio
MNC	Maternal Neonatal (or Newborn) Care
MOH	Ministry of Health
NFHP	National Family Health Program
NFHS	National Family Health Survey

NSMPA	National Safe Motherhood Plan of Action
OR	Operations Research
OSM	Operations Support Manager
PC	Project Coordinator
PCM	Pneumonia Case Management
PHC	Primary Health Care
PUM	Program Unit Manager
PWG	Pregnant Women's Group
RHF	Recommended Home Fluid
SCM	Standard Case Management
SHP	Sub-Health Post
SM	Safe Motherhood
STI	Sexually Transmitted Infection
TA	Technical Assistance
TBA	Traditional Birth Attendant
TFR	Total Fertility Rate
TOT	Training of Trainers
UNICEF	United Nations Children's Fund
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
VDC	Village Development Committee
VHW	Village Health Worker
WHO	World Health Organization

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A. EXECUTIVE SUMMARY

The Child Survival XIII Cost Extension project is located in the Bara District of the Narayani Zone of the Central Development Region of Nepal. The district is in the Terai, a lowland area that extends along the Indian border. The project area includes 98 Village Development Committees (VDCs). Bara has a total population of 600,000 inhabitants. Approximately 80,000 children under five years of age and 110,000 women of reproductive age are the target beneficiaries.

The goal of the project is to assist the Ministry of Health to improve the health status of children under five and of women of reproductive age (15-49) in Bara district. The end-of-project objectives are:

Behavioral: Women of reproductive age and mothers of children under five years of age will be practicing healthy behaviors and seeking medical care from trained providers.

Increased access to services: Communities and families will have increased access to health education, quality care and essential medicines.

Quality of care: Ministry of Health personnel, community volunteers and other service providers will be practicing appropriate integrated management of sick children (particularly pneumonia and diarrhea case management). Practitioners and volunteers will also deliver quality family planning and maternal and newborn preventive care.

Institutional strengthening: Community-based organizations, local non-governmental organizations, and Ministry of Health facilities in the district will be developed and strengthened to support and implement activities that enhance child survival.

Project interventions include: Control of diarrhea, Pneumonia Case Management, Maternal and Newborn Care, and Child Spacing. Project partners are implementing two complementary strategies to reach project objectives. First, the project set up a community based health education, services and monitoring system that is linked to and supports the Ministry of Health services in the district facilities. Second, partners are implementing the Integrated Management of Childhood Illness (IMCI) approach at the facility level and expanding the existing integrated community level approach (for management of diarrhea and pneumonia) throughout the district.

According to the final surveys, the project has either met or surpassed most of its objectives. The baseline lot quality assurance sampling (LQAS) conducted in October 2001, found that 16 percent of children with diarrhea in the past two weeks received oral rehydration therapy. The final survey found that 60 percent received ORS, the end-of-project target is 50 percent. The proportion of mothers who know at least three signs of pneumonia has increased from 15 percent to 98 percent (the project target is 50 percent). The health facility assessment conducted in 2002 found that 69 percent of children with pneumonia who visited a health facility received an appropriate antibiotic. In 2006 it was 100 percent. The HFA also found at baseline that the proportion of children with simple diarrhea who received ORS/RHF was 29 percent, whereas at the Final evaluation that

percentage had risen to 75. During the baseline lot quality assessment 32 percent of mothers reported that a trained provider attended their last delivery; the proportion increased to 77 percent at the final evaluation. The end-of-project target is 65 percent. The proportion of mothers who reported having received two doses of tetanus toxoid increased from 13 percent at baseline to 63 percent at the final (the end-of-project target is 50 percent). At baseline 24 percent of mothers who do not desire children in the next two years reported using a modern method of contraception and in June 2006, 66 percent did.

These successful results have occurred despite the fact that Bara District has had its services interrupted by the Maoist insurgency. The project was able to employ innovative strategies to address limitations imposed by the insurgency and still mobilize communities as well as reach them with the BCC messages. The project was also able to successfully work with the District Health Office (DHO) to provide regular training and updates to district staff. Another strategy contributing to the project's success is that since the mid-term the project has managed to install functioning CDPs in 94 percent of the district's VDCs.

Some of the priority conclusions and recommendations include:

- In sum the key lessons learned from this activity have been: 1) the importance of regular monthly review meetings at the district and sub-district (Ilaka level) health facilities to keep the staff motivated and maintain updated health status records; 2) Using LQAS as a monitoring tool every 6 months which helps the DHO review progress and make local health decisions and; 3) the effectiveness of targeted group education such as the pregnant women's groups and child groups to mobilize women and children to care for their own and the communities' health.

- Some of the major achievements and strengths of the project include the strong relationship that the project has developed with the government of Nepal, particularly the Child Health Division and other key offices at the MOH such as Nutrition and Family Health. At the district level this has translated into an active and powerful partnership with the District Health Office and the district field staff, allowing the project to strengthen staff skills as well local health structures and systems including local financing through community drug programs. The CS project has also strengthened Plan's position in Nepal allowing it to have influence in the policy process in Nepal.

- Another strength is the strengthening of Bara health facilities. At the beginning of the project most health facilities were not functioning but now 98 percent are operational including community drug programs.

Recommendations:

- It is very important that the monthly review meetings that have been installed in Bara district at the sub-district level continue and be supported by the DHO. Currently the DHO is supporting the review meetings. Plan intends to continue

using its staff to provide on going support for the CDP activities after the project ends. Although the CDPs are present and functioning in 94% of the district, some are new and need continued support to assure success. Plan may also want to consider scaling up this sub-district level review meeting model to its other districts.

- The review meetings in which facility service statistics are analyzed together with the records from FCHVs and the VHW registers, also need to incorporate LQAS monitoring data. The LQAS data should continue to be collected every 6 months. This will allow district personnel to understand where the service gaps and health needs are.

- Group approach. The project has had success in addressing project objectives by forming specific groups to address them. These include the Pregnant Women's Groups and Child Groups. These groups have been successful in motivating women to comply with the recommended visits for antenatal and postnatal care as well as improve immunization levels for children under 5. Given the continued concerns about neonatal mortality, it would be useful to work with these existing groups on issues of newborn care or form pilot groups of mothers with newborns to assist them with breastfeeding, early child care and immunizations.

- Turnover of government MOH staff continues to be an issue. At the beginning of the project t it was about 20 percent (10 percent is the norm). Now it is 10 percent so the project has had a positive influence on this. However, Plan and the DHO will need to continue to work on maintaining good morale and motivating staff through on going training updates, sub-district and district level review meetings etc. The DHO stated that they needed to focus on regular field supervision now that the insurgency is over and it will be important as this is one of the few indicators that was not met by the project. It would be advisable for the project to work with the DHO to develop a plan for regular DHO field supervision before the close of project.

B. ASSESSMENT OF RESULTS AND IMPACT OF THE PROGRAM

B1. Results: Summary Chart

Indicator/ Definition	Baseline (LQAS) **Oct'01**	Confidence Interval ± **CI**	LQAS **Jun'06**	Confidence Interval ± **CI**
BREAST FEEDING AND CHILD NUTRITION INDICATORS				
Percent of children aged 0-11 months who are breastfed with in the first hour after birth	**9**	**4.87**	**66**	**8.04**
Percent of infants aged 0-5 months who were fed breastfed milk only in the last 24 hours	**62**	**8.26**	**100**	
Percent of infant aged 6-9 months who received breast milk and solid foods in the last 24 hours	**73**	**15.82**	**96**	**4.81**
Percent of children aged 20-23 months who are still breast feeding	**77**	**14.72**	**85**	**12.23**
Percent of Children aged 6-23 months who received a vitamin A does in the last six months	**91**	**4.17**	**99**	**1.47**
CHILDHOOD IMMUNIZATION INDICATORS				
Percent of Children aged 12-23 months who have a Vaccination Card	**19**	**6.64**	**74**	**7.41**
Percent of children aged 12-23 months who received DPT 1	**16**	**6.20**	**71**	**7.68**
Percent of children aged 12-23 months who received measles vaccine	**11**	**5.22**	**72**	**7.62**
Percent of drop out- rates between DPT1 and DPT 3	**14**	**14.97**	**3**	**3.38**
Percent of children aged 12-23 months who received BCG, DPT3, OPV3 and measles vaccines before the first birthday	**10**	**5.05**	**67**	**8.00**
Percent of children aged 12-23 months who received OPV 3	**14**	**5.95**	**72**	**7.62**
SICK CHILD				
Percent of mothers of children aged 0-23 months who know at least **THREE** signs of childhood illness that indicate the need for treatment	**73**	**5.34**	**98**	**1.78**

DIARRHEA INDICATORS				
Percent of children aged 0-23 months with diarrhea in the last two weeks	**20**	**4.83**	**21**	**4.87**
Percent of children aged 0-23 months with diarrhea in the last two weeks who received oral rehydration solution (ORS) and/ or recommended home fluids (RHF)	**16**	**9.78**	**60**	**12.95**
Percent of children aged 0-23 who received breastfed same amount or more during diarrhea in last two weeks.	**62**	**12.84**	**95**	**6.00**
Percent of children aged 0-23 months with diarrhea in the last two weeks who were offered the same amount or more drink / fluid during the illness	**24**	**11.23**	**93**	**6.86**
Percent of children aged 0-23 months with diarrhea in the last two weeks who were offered the same amount or more food during the illness	**27**	**11.77**	**95**	**6.00**
Percent of Children aged 0-23 months with diarrhea in the last two weeks whose mothers Sought outside advice or treatment for the illness	**76**	**11.23**	**91**	**7.60**
Percent of mothers who can correctly prepare ORS	**34**	**8.60**	**84**	**6.20**
Percent of mothers who usually wash their hands with soap or ash before food preparation.	**23**	**7.10**	**92**	**4.68**
Percent of mothers who usually wash their hands with soap or ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated.	**5**	**3.80**	**78**	**7.02**
ARI IDICATOR				
Percent of Children aged 0-23 months with cough and fast / difficult breathing in the last two weeks who were taken to a health facility or received treatment.	**79**	**9.99**	**80**	**14.31**
PRENATAL CARE INDICATORS				
Percent of mothers with a maternal card (Card-confirmed) for the youngest child less than 12 months of age	**17**	**6.43**	**65**	**8.12**

Percent of mothers who received at least **TWO** tetanus toxoid injections (Card confirmed) before the birth of the youngest child less than 12 months of age.	**13**	**5.67**	**63**	**8.20**
Percent of mothers who had at least **ONE** prenatal visit prior to the birth of her youngest child less than 12 months of age	**45**	**8.46**	**78**	**7.02**
Percent of mothers who received /brought iron supplements while pregnant with the youngest child less than 12 months of age.	**36**	**13.30**	**93**	**4.27**
PLACE OF DELIVERY AND DELIVERY ATTENDED				
Percent of children aged 0-11 months whose delivery was attended by a skilled health personal upto TBA level	**32**	**7.95**	**77**	**7.19**
Percent of children aged 0-11 months whose delivery was attended by a skilled health personal upto MCHW level			**42**	**8.39**
Percent of children aged 0-11 months whose delivery involved use of a clean birth kit or whose cord was cut with a new razor	**96**	**3.23**		
Percent of children aged 0-11 months whose delivery involved use of a clean birth kit			**75**	**7.34**
Percent of children aged 0-11 months who were immediately breastfed with the mother immediately after birth.	**2**	**2.52**		
Percent of children aged 0-11 months who were placed with the mother immediately after birth	**25**	**7.34**	**82**	**6.54**
POSTPARTUM CARE				
Percent of mother who had at least **ONE** postpartum check-up	**11**	**5.38**	**63**	**8.20**
Percent of mothers able to report at least **TWO** known maternal danger signs during the postpartum period	**41**	**8.37**		
Percent of mothers able to report at least **THREE** known neonatal danger signs			**98**	**2.07**
Percent of mothers able to report at least **TWO** known neonatal danger signs	**71**	**7.68**	**98**	**2.07**

Percent of mothers who received a Vitamin A dose during the first six weeks after delivery	**16**	**6.20**	**80**	**6.74**
Percent of mothers who received at least 1 month iron tablets during the first two months after delivery	**10**	**5.05**	**75**	**7.34**
CHILD SPACING				
Percent of non pregnant mothers who desire no more children in the next two years or are not sure, who are using a modern method of child spacing	**24**	**7.54**	**66**	**8.04**
Percent of mothers who report at least one place where she can obtain a method of child spacing	**54**	**8.47**	**100**	
Percent of children aged 0-23 months who were born at least 24 months after the previous surviving child	**58**	**11.10**	**69**	**12.90**
Percent of children aged 0-23 months who were born at least 36 months after the previous surviving child	**12**	**7.26**	**14**	**9.80**
KNOWLEDGE OF DANGER SIGNS DURING PREGNANCY, POSTNATAL AND NEW BORN CHILD				
Percent of mothers (15-49 years) who know at least **TWO** danger signs/symptoms during pregnancy	**29**	**7.68**	**100**	
Percent of mothers (15-49 years) who know at least **THREE** danger signs/symptoms during pregnancy	**26**	**7.48**	**99**	**1.47**
Percent of mothers who knows at least **TWO** danger signs/ symptoms of after delivery	**41**	**8.37**	**98**	**2.07**
Percent of mothers who knows at least **THREE** danger signs/ symptoms of after delivery	**11**	**5.22**	**95**	**3.80**
Percent of mothers who know at least **TWO** danger sign of new born	**71**	**7.68**	**98**	**2.07**
Percent of mothers who know at least **THREE** danger sign of new born	**37**	**8.20**	**98**	**2.07**

DANGER SIGNS OF PNEUMONIA AND DIARRHEA				
Percent of mothers who know at least **THREE** danger signs/ symptoms of pneumonia	**15**	**6.07**	**98**	**2.52**
Percent of mothers who know at least **THREE** danger sign of diarrhea / dysentery	**14**	**5.95**	**92**	**4.48**
KNOWLEDGE ON HIV/AIDS/STD				
Percent of mothers who knows at least **ONE** HIV/AIDS and STD transmission (MOT)	**14**	**5.95**	**68**	**7.95**
Percent of mothers who knows at least **ONE** HIV/AIDS and STD prevention (MOT)	**14**	**5.95**	**69**	**7.85**

B2. Results: Technical Approach

A) Project Overview

The project is located in the Bara District of the Narayani Zone of the Central Development Region. The district is in the Terai, a lowland area along the Indian border. The project area includes all 98 Village Development Committees --VDC administrative divisions -- of the district. This project followed a previous Child Survival project, which was located in 33 VDCs in Rautahat district and 17 VDCs in Bara District. Bara has a total population of 600,000 inhabitants. Approximately 80,000 children under five years of age and 110,000 women of reproductive age are the target beneficiaries.

The goal of the project is to assist the Ministry of Health to improve the health status of children under five and of women of reproductive age in Bara district. The end-of-project objectives are as follows:

- Behavioral: Women of reproductive age and mothers of children under five years of age will be practicing healthy behaviors and seeking medical care from trained providers.

- Increased access to services: Communities and families will have increased access to health education, quality care and essential medicines.

- Quality of care: Ministry of Health personnel, community volunteers and other service providers will be practicing appropriate integrated management of sick children (particularly pneumonia and diarrhea case management). Practitioners and volunteers will also deliver quality family planning and maternal and newborn preventive care.

- Institutional strengthening: Community-based organizations, local non-governmental organizations, and Ministry of Health facilities in the district will be developed and strengthened to support and implement activities that enhance child survival.

Project interventions include: Control of diarrhea, Pneumonia Case Management, Maternal and Newborn Care, and Child Spacing. Project partners are implementing two complementary strategies to reach project objectives. First, the project set up a community based health education, services and monitoring system that is linked to and supports the Ministry of Health services in the district facilities. Second, partners are implementing the Integrated Management of Childhood Illness (IMCI) approach at the facility level and expanding the existing integrated community level approach (for management of diarrhea and pneumonia) throughout the district.

b) Progress Report by Intervention Area

Control of Diarrheal Disease and Pneumonia Case Management

Activities: These two interventions have been implemented together through the IMCI approach. Training was given to Ministry of Health staff at the health facilities and to female community health volunteers to address community based approaches. Staff from the project and the Ministry of Health are jointly training, supervising and monitoring the volunteers and birth attendants. They also procure and supply oral rehydration solution packets and cotrimoxazole tablets to health facilities and to the volunteers and birth attendants.

Results: The baseline lot quality assessment -- conducted in October 2001 -- found that 16 percent of children with diarrhea in the past two weeks received oral rehydration therapy. The mid-term assessment (January 2004) showed that 35 percent had received it; the final survey found that 60 percent received ORS, the end-of-project target is 50 percent. The proportion of mothers who know at least three signs of pneumonia has increased from 15 percent to 98 percent (the project target is 50 percent). The percent of mothers seeking care when a child shows pneumonia danger signs only changed from 79 percent at baseline to 80 percent at the final. The target was 90 but this may have been unrealistic. The previous project had an intense focus on community PCM and achieved a high level of compliance. The fact that the project maintained this high level is significant. Data for additional indicators are presented in the Attachments.

The health facility assessment conducted in 2002 found that 69 percent of children with pneumonia who visited a health facility received an appropriate antibiotic. In 2006 it was

100 percent. Female community health volunteers also administer cotrimoxazole tablets to children with pneumonia. The HFA also found at baseline that the proportion of children with simple diarrhea who received ORS/RHF was 29 percent, whereas at the Final evaluation that percentage had risen to 75. This may have been facilitated by the availability of commodities through the Community Drug Programs.

The mid-term evaluation team found that health facilities and community-based health workers had shortages of oral rehydration solution packets. However, at the final evaluation these shortages were no longer evidenced, mainly because of the Community Drug programs. As with some other commodities (vitamin A for administration to women after delivery or when bringing children for BCG vaccine), shortages were attributed to increased demand resulting from promotional activities carried out by the project in the communities. At mid-term it was discovered that demand was reportedly outstripping the capacity of Ministry of Health to keep facilities and workers supplied. The project and DHOs prioritization of the community drug programs has corrected this situation.

Maternal and newborn care and child spacing

Activities: The project is training female community health volunteers and traditional birth attendants in maternal and newborn care and child spacing. Birth attendants find training on safe and clean delivery practices valuable. The volunteers educate pregnant women about the need for prenatal and postnatal care, tetanus toxoid vaccination, and iron and folic acid supplementation through pregnant women's groups. Volunteers and birth attendants distribute contraceptives, iron and folic acid tablets, and clean home delivery kits in the communities where they work. The project has also developed a flipchart on newborn care and distributed it to volunteers for use in educating mothers.

Results: During the baseline lot quality assurance sampling 32 percent of mothers reported that a trained provider attended their last delivery; the proportion increased to 68 percent at the midterm and 77 percent at the final evaluations. The end-of-project target is 65 percent. The proportion of mothers who reported having received two doses of tetanus toxoid increased from 13 percent at baseline to 20 at mid-term to 63 percent at the final (the end-of-project target is 50 percent). At baseline 24 percent of mothers who do not desire children in the next two years or are not sure reported using a modern method of contraception; in January 2004, 43 percent did so and in June 2006, 66 percent did. See the Attachments for data about other indicators. Although the project has worked hard to discourage community members from treating simple diarrhea with antibiotics, and although the percentage of villagers doing so dropped significantly from 75 percent to 17, it was short of their 10 percent target.

During the first Child Survival project, community members of Nijgadh (in the northern part of Bara District) established a maternity home with support from Plan. The facility was initially located in a rented building. Now it has its own building and no longer receives funding from Plan. However, Plan is anticipating that it will support some EOC training at the MOH training facility in the future for the nurse midwives working there.

Auxiliary nurse midwives admit women with high risk pregnancies and provide skilled care to them during the final weeks of pregnancy. They also offer routine prenatal and postnatal check-ups, family planning services and child care. The home maintains and operates two ambulances that transport patients to referral hospitals. The ambulance service generates enough revenue to meet its costs and a portion of the maternity home expenses.

Special Outcomes

The project conducts two surveys a year to monitor progress in achieving targets. These surveys employ the Lot Quality Assurance Sampling technique and generate information from the seven field areas that the district is divided into by the project. Project partners review results, discuss findings, identify problems and recommend subsequent action. The Plan project was one of the first to successfully use LQAS not only for program monitoring but also for baseline and final surveys. Many organizations in Nepal, including Save the children and CARE, have received assistance from the project staff for initiating LQAS surveys.

The project staff have documented its use of the LQAS technique in several publications. An issue of the CSTS newsletter highlighted the project's monitoring strategy (Espeut D., 'Effective Monitoring with Efficient Methods: Plan/Nepal's Experience with LQAS in Project Monitoring' Child Survival Connections, Volume 1, Issue 2, Calverton MD: Child Survival Technical Support Project and the CORE Group). A chapter in a book on community based health care also highlights the project's LQAS experience (Valadez, J and Devkota BR. 2002. 'Decentralized Supervision of Community Health Programs: Using LQAS in two districts of Southern Nepal' Community Based Health Care: Lessons from Bangladesh to Boston, Edited by Rohode J and Wyon J, Boston, MA: Management Sciences for Health).

B3. Cross-cutting Approaches

a) Community Mobilization

A few months before the mid-term after reviewing the project monitoring data, staff realized that despite their work with mother's groups, they were still not reaching their target group of pregnant women. So in coordination with District Health Office staff, the project initiated the formation of pregnant women's groups. 430 groups are currently active. Each group consists of an average of 8-12 pregnant women. Female community health volunteers facilitate the groups and meetings are held once a month. The groups serve as a forum for discussion of health problems and for education of members and other women about pregnancy care and other maternal and child health topics. The women enjoy meeting and discussing pregnancy related concerns. They also develop community maps with their homes and dots indicating the services they've received, which they update at the meetings. Members receive prenatal care at local health facilities. Since the creation of the groups, health facility staff report increases of antenatal check-ups, iron and folic acid supplementation among pregnant and lactating

women, postnatal vitamin A supplementation, prenatal tetanus toxoid vaccinations, and immunizations among children aged 12-23 months.

The project also works with child clubs in the district. Plan supports over 200 child clubs in the district, 56 of which are in non Plan communities. Project partners have trained club members in staging dramas in their villages to deliver health messages. Club members participate in activities aimed at raising awareness in their communities about health problems, child marriage, bride trafficking and have helped with polio vaccination campaigns. The clubs originally evolved from efforts by Plan to address child rights. The CS project in Bara has been able to further provide basic health training and assistance with organizing meetings. Most of the clubs collect dues and have an annual plan of action. Many of the clubs target girls' enrollment in schools.

The project helps the Ministry of Health with national campaigns to deliver vitamin A, deworming medication (albendazole), and polio vaccine to children. Female community health volunteers inform community members about campaign dates and locations, administer the drug or vaccine, and keep track of the number of children who participate. The project assists the District Health Office with procurement and distribution of supplies.

The Maoist insurgency has contributed to inadequate program support particularly in the district interior due to reduced security. Calling meetings with key district authorities has also been hampered by shifting district priorities occasioned by the present conflict. This notwithstanding, as mentioned at the beginning of Section B "Assessment of Progress", most activities in the communities have been conducted as scheduled. Project staffs attribute this success to "neutrality, transparency, and good relations". They welcome participation by all in discussions about project activities in the villages -- without regard to political affiliation; they describe project progress and the management of project resources in an open manner; and involve community-based volunteers in efforts to build positive relationships with communities.

In a sense the project has been able to use the restrictions imposed by the insurgency to strengthen local organization of services. Because the area health workers were not able to come to regular district meetings and DHO staffs were not able to travel to the field to conduct supervision and meetings, the DHO in collaboration with the CS staff decided to institute regular monthly meetings at the sub-district (Ilaka) levels. Now the sub-district In Charge arranges monthly meetings with field staff from the facility and surrounding communities (FCHVs). Previous to the meeting, the FCHVs meet with mother's groups in their respective communities and compile local health data. This information is then presented at the sub-district meeting along with data from the other area communities. All statistics in accord with MOH reporting categories, are recorded on a white board which is displayed at the sub-district office (Health Post or Primary Health Care Centre). This activity has served as an inspiration for all the health workers. When interviewed the health workers and health management committee members discussed how they had not understood the importance of the data before and now they have a better understanding of the importance of their work. According to the In-Charges interviewed,

these regular meetings have greatly contributed to a sense of ownership of the local health process by local health workers.

Most of the community mobilization objectives were met or surpassed. As of June 2006, 98 percent of the VDCs had at least 3 mothers groups with demonstrated health promotion activities and plans for BCC activities (LOP target 80 percent). By the final evaluation, 29 percent of HFCs or mother's groups are planning and monitoring local health activities (4 activities: 1) regular meetings, 2) establishment of health savings fund, 3) PWG formation and safer motherhood service and 4) support to out reach clinics). As of June 2006 43 percent of the FCHVs have established community health funds (25 percent were the target). 92 percent of FCHVs were involved in education and community mobilization efforts 8 times in the last 12 months (target is 70 percent). 67 percent of VDCs have committed some financial support to CS activities at the community level (target 60 percent). At the time of the FE 94 percent of health facilities have established community drug programs and community drug management committees.

The evaluation team believes that with all these accomplishments that the activities will be maintained by the communities and health facility staffs. Also despite the fact that the CS project is ending, Plan will continue to operate in Bara at a reduced level but a proportion of CS staff will continue working with the district health staff to monitor activities at facilities and in communities and will provide guidance and support where needed.

In sum the real lessons learned from this activity have been: 1) the importance of regular monthly review meetings at the district health facilities to keep the staff motivated and maintain updated health status records; 2) Using LQAS as a monitoring tool every 6 months which helps the DHO review progress and make local health decisions and; 3) the effectiveness of targeted group education such as the pregnant women's groups and child groups.

3b) Communication for Behavior Change

The project employs a variety of methods including the use of role plays, street dramas and puppet shows to change behaviors among community members and health facility staff. Pregnant women's groups and child clubs provide project partners the opportunity to deliver messages on maternal and child health in a group setting. Meetings of women's groups often attract non-members (such as mothers and mothers-in-law). As mothers-in-law have important roles in household decision making, their participation is encouraged. Members of child clubs take what they learn in their groups into the community (families, schools etc.). The evaluation team visited a club that has been very active in community affairs over the last three years. The children persuaded community elders to stop several child marriages -- of girl club members 12 or 13 years of age. The club members in this community also claimed that at this time all girls are enrolled in school thanks to their efforts.

Project staffs provide interpersonal communication skills and coaching training to District Health staff to improve the way they interact with patients who visit health facilities. In addition, health staffs participate in the training of community volunteers and in outreach activities in the communities. Having served as trainers and because of interactions with community members outside health facilities, it was anticipated that they would provide better care to patients who are referred by volunteers and to others who visit their facilities. This seems to have been the case as according to community interviews, community members are taking a stronger role in managing their care working in coordination with health facility staff.

Project staff have used printed materials, posters, pamphlets and banners developed under the previous project. Many of them are for non-literate audiences and consist of diagrams that were carefully pretested and have proved very useful in communicating health messages. The project also makes use of Ministry of Health documents to develop training and education materials. The resulting printed materials are consistent with Ministry recommendations. To supplement these materials, project staff have prepared a flip chart and pictorial cards on maternal and newborn care. The project learned that in training community health workers they should employ the same messages as are used in the key messages in the materials. So the BCC materials and FCHV training use the same words. (In March 2006 two project staffs attended a Behave Framework workshop in Bangladesh to horn their skills in defining activities that best address key factors.)
They have also placed billboards with health messages in the project area as well as carried out radio broadcasts to reach the population. The project support regular radio spots between July 2005 through June 2006 that aired through a local Birgunj FM station between 7:15 and 7:30 every Monday morning in the local language, Bhojpuri. Key CS messages were disseminated such as danger signs of CDD, ARI, pregnancy and post partum periods as well as the importance of iron, family planning and MNC. Literacy levels are low in the district (both among community members and community-based volunteers) and pictorial materials assume great importance in educational activities. As a result of the mid-term recommendation, the project contracted Mithila artists from Janakpur to develop wall paintings on CS health themes. While quite lovely, the art work was also costly and does not appear to have had the same relevance to Bara residents as it does to residents in Janakpur and districts farther east.

According to mothers groups, health management committees and the facility staffs, the new behaviors will be maintained because the facility will continue to monitor the community activities conducted by the FCHVs and TBAs as well as the outreach conducted by VHWs, MCHWs and other staff. When indicators show in the monthly reporting that there is a problem in certain communities, the staff will address it as it has been doing during the past years. The evaluation team believed that with the decentralization of services and the fact that many VDCs are now supporting health services in some form together with the Community Drug Programs that are now installed in 98 percent of the VDCs, that there is good likelihood that these behaviors will be maintained. Also Plan will continue to work with the DHO in Bara. It will be cutting back its level of involvement but it will monitor health activities and provide support where needed.

3c) Capacity Building Approach

i: Strengthening the PVO Organization

Child Survival programming has had an important impact on Plan as an organization. As discussed above, its experience with LQAS has been significant. Plan Nepal's experience has allowed it to be successfully employed in other Plan countries such as Cameroon, Kenya, Mali, Burkina Faso, Senegal and others.

As noted in the last section, the Plan Nepal CS staff have written a number of papers and abstracts about their experiences that have been presented at International meetings and journals such as the CSTS Connection which highlighted Nepal's LQAS experience. Plan headquarters is also using the experience the CS project conducted with the Child Survival Sustainability Assessment (CSSA) tool in other Plan countries and comparing the experience with Nepal's.

Currently Plan as an organization is undergoing a restructuring process. One result is a decision that has made most central level technical area managers redundant. After conducting an extensive survey among program offices, they found that most technical oversight was more effective at regional levels. Child Survival was an exception. The survey found that Country Offices unanimously agreed that the headquarters support and technical tools provided through the CS program have been invaluable and useful for other country programs. The CS headquarters backstop believes that the success of the Nepal experience has helped maintain the headquarters office.

ii. Strengthening Local Partner Organization

Plan has invested a lot in strengthening 2 local partner organizations, the Community Welfare Center (CWC) and the Child Welfare Society (CWS), who have primarily been responsible for training support for the project. Particular support has been given to management and administration areas including accounting, bookkeeping, office management and information systems. Originally the two agencies worked together but after the mid-term, on a recommendation of the evaluation, the two agencies separated. Each has taken responsibility for different training support activities. For example, CWC provides HMIS training to District staff. They also provide Community Drug Program training at district health facilities (HPs and SHPs) and assist with setting up CDP systems in accord with MOH guidelines. They have provided CDP training in 96 VDCs. They have also organized FCHV refresher training with district health staff, as well as refresher IMCI training for new district health staff. CWS provided training to the FCHVs and other community workers in community mobilization and the formation of PWGs. They also work with the DHO to monitor and improve the EPI program in the 98 VDCs.

The NGO partners believe that their experience with the CS project has strengthened their ability to manage health programs and they feel competent to manage child survival projects. In addition to financial management they have developed networking, program

planning and monitoring skills. Most valuable has been what they've learned about working with the National Health system and coordinating with the DHO operating system. They've learned operational skills such as record keeping, accounting, inventory management etc. During the CDP training in communities, they learned the importance of doing work planning with the communities and setting monthly goals.

Perhaps the biggest success has been in working with the district health office and the district health staff and facilities. The project has supported staff at the DHO to monitor IMCI and the district has now taken over the position. The CS project also used its influence to recruit the new district Public health Officer, who previously worked in the National Child Health Office, and is actively reviewing and strengthening the district health systems. The project has fortified all the district health facilities assuring all have adequate supplies and equipment. The project has also worked with district staff to assure that all facility and community personnel have received updated training in IMCI, CDD, PCM, family planning and maternal-newborn care (see training section below for more detail). The District has become very involved in managing data collection efforts at all facility and community levels and monitoring progress. The DHO believes that the project has had a significant impact on reducing IMR. Previous to the project according to the MOH records, Bara District ranked 62 out of 75 in terms of health status. In 2005 it was ranked 48 and district officials expect it to rank in the 30s in 2006. While the indicators include all health areas covered by the MOH and not all of these are addressed by the CS project, there have still been significant improvements.

iii. Health Facility Strengthening

The final HFA shows that health staffs skills have improved dramatically since the beginning of the project, with most clinical exam indicators for project intervention areas ranking in the 90 percent range. The HFA showed that 80 percent of workers had received supervision in the past 6 -12 months and received supportive feedback. It also showed that 94 to 100 percent of sick children seen at the facility were receiving correct home care and caretakers knew 2 signs indicating a need to return to the facility for care if the child's condition worsened. No facilities had experienced ORS stock outs during the previous month and 100 percent of facilities had up to date immunization and patient registers. At the beginning of the project only 44 percent of registers were up to date.

It is expected that once the project ends that the DHO will be able to maintain updated systems and training for HF staff and therefore maintain the gains in health facility care that have been made. The evaluators were able to observe an MCHV training course at the DHO during the evaluation which was part of the regular DHO training program.

iv. Strengthening Health Worker Performance

The project has built capacity to deliver and track health care services at the community level and among health facility, partner NGO, and Plan staff. The strongest capacity building efforts are at the health facility and community levels -- formation of pregnant women's groups and child clubs and training of traditional birth attendants and female

community health volunteers. The project has greatly strengthened the capacities of its main partner, the DHO and district health facility staffs. Although Ministry of Health staff participate in leading training activities, they depend on Plan staff and NGO partners for community mobilization, monitoring, and other project-related activities.

As mentioned above by project-end, 80 percent of village development committees are expected to have at least three pregnant women's groups (or other mothers' groups) with demonstrated health promotion activities. In June 2006, 98 percent of the village development committees were reported to have such groups. Compared to an end-of-project target of 25 percent, 29 percent of female community health volunteers had established community health funds and mechanisms for cost recovery by June 2006. In October 2002, 10% of the volunteers reported conducting community mobilization and education activities eight times in the last 12 months. In June 2006, the proportion had increased to 92 percent (the final target is 70%). Progress has also been slow in improving the frequency of supervisory visits by Ministry of Health staff. At baseline 7 percent of health workers reported at least one occasion in the last three months when a Ministry of Health supervisor visited them. District Health Office records show that in June 2006, the proportion had increased to 52 percent; the final target is 75 percent. The DHO personnel explained the unattained target by the fact that they had not been able to complete the programmed supervisions and field visits because of the insurgency. They also stated that they hoped to greatly increase field visits in the near future now that there is a peace agreement.

The regular review meetings at sub-district levels have really had a major impact on health worker performance. This really got going after the mid-term when the Plan Health officer had a meeting with the DHO to see what could be done to encourage regular staff supervision and review of activities and data collected. They also decided to reduce the number of indicators for monitoring to 13. Previously they had measured a large number of indicators that were too numerous for project monitoring.

v. Training

Project partners have conducted 50 training events since the beginning of the project (for staff members from Plan, partner non-governmental organizations, Ministry of Health staff and community-based volunteers). The project training summary is presented in the Attachments . Training has included:

- Transformation for health for project staff (training based on Paulo Freire's philosophy and designed to help trainees gain skills in solving problems in communities in a participatory way)
- General training of trainers (a course on training methods and facilitation techniques)
- Integrated Management of Childhood Illness for health facility staff and C-IMCI for community volunteers.
- Control of diarrheal disease and pneumonia case management
- Maternal and newborn care and family planning

- Clean home delivery (training of traditional birth attendants)
- Infection control (training of peons -- support staff -- from health facilities)
- Drama (training of child club members in techniques for staging plays on health issues)
- Community drug program management and organization for communities
- Lot Quality Assurance Sampling training for district personnel
- Health facility assessment methodology
- Community Drug Program TOT for HF staff and training for SHP staff
- Behave Framework Training for 2 Plan staff in Dhaka, Bangladesh

Participation in Meetings: In addition to attending formal training events and workshops in the project area, Plan staff (from Bara, Kathmandu, and Washington, DC) participate in national and international meetings and workgroups organized by other agencies (such as the Ministry of Health, Global Health Council, the Child Survival Technical Support Project, and the Child Survival Collaborations and Resources Group). In May 2002, Babu Ram Devkota, the Project Coordinator, participated in Global Health Council's annual meeting in Washington D.C. In September 2002 he presented a paper at the Data for Action Workshop organized by the Child Survival Technical Support Project and the Child Survival Collaborations and Resources Group ("Using Biannual LQAS Data to Improve Child Survival and Safe Motherhood in Nepal: Program Results from 1999 to 2001"). Since the mid-term, Babu Ram, who has moved out of Nepal, continues to work under contract for Plan providing LQAS training to other projects.

Supportive Supervision: In order to strengthen capacity for delivery of health services in Bara, the project supplements training events with review meetings and supportive supervision. Trainees are encouraged to report problems they face in their daily work during supervisory visits and they receive support in solving problems from their supervisors. Plan has designed several checklists with input from the Ministry of Health. These checklists help supervisors remember key issues when they observe project activities in health facilities and communities.

Effect of Capacity Building Efforts on Facilities and Community-based Volunteers: The team that conducted the baseline health facility assessment in January 2002 was able to visit only a third of the facilities (the rest were closed). All the facilities visited by the final evaluation team were open and project staff report that health posts are now operational year-round. Facility staff members stated, during interviews by the team, that their ability to manage diarrhea, pneumonia, and other childhood illnesses has improved after attending project-sponsored training events. They were also pleased with the training provided to peons (on infection control). Sanitation at health posts has improved. At the district hospital, the chief of the District Health Office personally leads an effort to clean the premises every month. During interviews with the evaluation team, traditional birth attendants reported that training in clean home deliveries has been very useful. However health facility staff indicated that although they appreciated all the training, the most useful for them has been the IMCI training which has revolutionized the way they view and treat patients. They now look at the patient from an integrated standpoint, no longer only focusing on the immediate problem or task but examining the

child as a whole and providing counseling to mothers about all areas of child health and nutrition.

After the project it is expected that some training will continue to be conducted by the Child Health Division of the MOH, such as the regular IMCI annual reviews that they currently have. The DHO will take over training activities and Plan will continue to help them with planning.

3d. Sustainability Strategy

Although there were no sustainability objectives there were the institutional objectives mentioned above in which the project has either met or surpassed its targets achieving them at between 80 and 100 percent.

Several activities conducted by the project point to the long term sustainability of CS activities. The maternity home in Nijgadh, which was begun during the first CS project, has been operating without Plan support since 6 months before the 2004 mid-term evaluation. This year Plan will support EOC training for the nursing staff at the center. Plan is arranging the training with the MOH at the Narayanghat Hospital training center.

The phase over plan of responsibilities to the DHO is on schedule and the project has been scaling back since July 2005. As noted above local financing of the CDPs is good, with 94 percent of health facilities having them. In addition, 42 percent of FCHVs have community revolving funds with mothers groups to support re-supply of commodities. Also 67 percent of VDCs have agreed to provide some support to health facilities and the government has recently increased the amount budgeted for health that is obligated to the VDCs. Previously it was a half million rupees that should go to health now it is 1 million.

One of the obvious conclusions is that the various community groups that have been mobilized through the project such as the health management committees, the mothers groups, PWGs and the CGs have built increasing demand for services and quality care.

In July 2006, the project and the District health staff conducted a Child Survival Sustainability Assessment (CSSA) workshop and applied it to Bara District. Findings showed that the community capacity index scored the highest at 76.6, the health outcome index and health services index both scored 63. The organizational capacity index scored 67 and the organizational viability index scored 51. The environmental index scored the lowest at 32. The environmental index includes many factors beyond the immediate control of the project, such as education and female literacy levels, percent of landless populations as well as decentralization and implementation status. Although these factors are not in the immediate project area, they are in areas that Plan is trying to address through its other programs. The CSSA has proved a useful tool for Plan to assess its long term impact not only in Nepal but in other countries.

C. PROGRAM MANAGEMENT

Project personnel in Bara are highly skilled managerially and technically and are led by a very knowledgeable and experienced Project Coordinator, Bhagawan Das Shrestha. They receive good support from Dr. Kedar Baral, the Kathmandu-based National Health Advisor and from Dr. Pierre Marie Metangmo and Dr. Laban Tsuma (from Plan's Washington, DC office), and Dr. Sun Lal Thapa (Child Health Division, Ministry of Health, Kathmandu). Project team members have forged excellent working relationships with each other and with staff from partner organizations. Many of them have worked together for years (during the previous Child Survival project and the current project). During the final evaluation, representatives of local non-governmental organizations, District Health Office, the Child Health Division and Plan's Kathmandu and US offices commended project staff for their good teamwork.

C.1 Planning

Bara district is divided into seven field areas. Field teams consisting of a Community Health Officer and 1-3 Assistant Community Health Officers conduct much of the planning and decision-making for project management in each area. The teams work closely with female community health volunteers, traditional birth attendants, pregnant women's groups, and health facility staff.

Two advisory groups meet at the district level every two months (the Reproductive Health Committee and the Quality Control Committee). Project management issues are discussed in these committees. However, some supply and staffing issues are still negotiated at the national level. The project is having more and more success with that and having more influence on the types of staff assigned to Bara district.

The project has an annual plan based on the workplan and LQAS findings. After the annual plan is developed, each field area develops its annual plan. At monthly planning meetings, the staff present their activities, discuss constraints, lessons learned and then based on this develop the next months plan. Each field area has a monthly work plan with daily activities. If there are problems in an area then visits by project and DHO staff are organized to follow-up.

Overall the project found the DIP workplan useful. The annual workplans are based on the DIP. There were a few strategies that weren’t foreseen in the DIP that the project had to develop such as the sub-district level monthly review meetings, but in general the DIP plan was the basis. The DIP provided the overall direction for the project. They sometimes had problems due to the conflict in the area so the project prepared strategies to work around it such as the review meetings, PWGs and CGs which according to project staff were the major reasons they achieved results.

C2. Staff Training

As described in Section B.3c (Cross-cutting Approaches: Capacity Building Approach), project personnel have participated in a number of training events during the life of

project. Trainees are tested before and after the events to measure changes in knowledge levels. New knowledge and skills are also monitored and reinforced through review meetings and supportive supervision. In addition to receiving the training, staff are also facilitators for C-IMCI, logistics management and other activities.

The main lessons learned for staff training include that it is key to have fixed interval refresher training for community and facility staff. Also training needs to be followed with supportive supervision.

The staff saw a need for further training needs to develop negotiation skills and learn how to handle difficult people, clients, health workers etc.

C3. Supervision of Program Staff

Project staff visit health facilities and community health volunteers to monitor their work, reinforce knowledge and skills gained during training workshops, and to help solve problems. They encourage District Health Office staff to accompany them during their visits. As described in Section B.3.c (Cross-cutting Approaches: Capacity Building Approach), supervision by district office staff has increased over the course of the project. However, even now supervisors from the district office are able to visit only 23% of health workers over a three-month period. They lack adequate transportation and until recently felt unsafe traveling to villages because of the Maoist insurgency.

All program staff participate in monthly review meetings and based on findings the project staff find out what the needs are for TA and visit the program sites as required. The monthly review meetings will continue after the project ends and will be run by the DHO. The DHO is already carrying out some supervisory activities like the monthly review meetings with district staff which were previously run by the project. The DHO has recently brought in a new Public Health Officer (PHO) who is actively recruiting new staff and changing old staff in the district that are not producing. CS staff believe that a result of these on going efforts the district will have very strong staff in place.

C4. Human Resources and Staff Management

Ministry of health staff members at the district office and health posts are frequently transferred. This disrupts service relationships with community members and programmatic decision making. It is hoped with the new PHO being so active in the district that he will be able to negotiate with central authorities to reduce staff transfers.

The Plan team in Bara has been a remarkably stable group with little turnover. The original Project Coordinator did leave after the mid-term but was replaced 4 months later. Plan managers in Bara and Kathmandu (Project Coordinator, National Health Advisor, Human Resource Manager, and Country Director) have been aware of the need to plan ahead in order to find jobs for project staff after funding ends in 2006. They are planning to maintain two thirds of the current staff in Bara to continue working on CS activities, which demonstrates Plan's commitment to continuing CS in Bara. They will also be

moving some personnel into positions with other Plan projects in Bara and other districts of Nepal.

Essential personnel policies are in place and CS staff, although hired specifically for the project, do receive most of the same benefits of regular Plan staff. Staff morale is high especially since a decision was made to maintain the CS staff at Plan. Currently 3 CS staff have taken jobs in other districts. The Plan Health Coordinator is trying to implement health programming that follows the principles of the CS project, though there is not as much staff in the other districts.

C5. Financial Management

The Finance Officer provides monthly financial reports to the Project Coordinator, who consolidates the information and submits quarterly reports to the Operations Support Manager via the Program Unit Manager. The reports are then passed on to Plan's U.S. office where they are reviewed for compliance with USAID requirements and then submitted to USAID. Funding transfers are made on a monthly basis from the US office to the project to reimburse project expenditures.

The NGO partners send expenditure reports to the project accountant who then sends them to the Operations Support Manager who includes it with the rest of the project accounts and forwards it on to Plan’s US accounts office.

In 2005 for USAID, Price Waterhouse audited the Plan Nepal CS project accounts and there was “no comment.” The Health Coordinator spent a lot of time with the auditors explaining the project and partner activities.

The project expects to have spent all the allocated funds by the end of the project, September 29, 2006. There were funds left over from the first CS project that were spent during the first year of this project. Plan has also provided complementary resources for activities. The project has had enough outside technical assistance. The headquarters staff, Laban Tsuma and Pierre Marie Metangmo, worked with the CS project to apply the CSSA framework to Bara district. The DHO and NGO project partners participated in the in the September 2005 workshop.

C6. Logistics

The mid-term report indicated that the project health facilities and community-based health workers were facing shortages of some medicines and other commodities (such as BCG vaccine, oral rehydration solution packets, and vitamin A for administration to women after delivery). District officials pointed to insufficient supplies from the national level and stated that they quickly move commodities to health facilities and workers, with help from Plan and the Nepal Family Health Program, after they are received from central supply units. They wanted the Ministry of Health to step up supplies of these commodities to keep pace with the increased demand that resulted from promotional activities carried out by the project in the communities.

Since the mid-term, the CDP program has really evolved to fill the gaps from the MOH central supply. Each sub-health post is given 25,000 rupees worth of drugs which is inadequate for all the drugs needed but with the CDP program in operation they are able to maintain supplies. 98 percent of VDCs have operating CDPs. Also the MOH drug supply system has improved so drugs can be requested when supplies are low. There is a basic charge for medicines but essential drugs such a cotrimoxazole, vitamin A and iron are distributed gratis.

C7. Information Management

A strong community monitoring system is in place. Mothers groups and Pregnant women's groups prepare village maps that provide a snapshot of preventive services received by their members. Female community health workers compile data on the status of community families and how up to date mothers and children under 5 are in receiving preventive facility and outreach services. This data is share with health facility and project staff at regular monthly meetings.

The project also conducts a survey every six months to monitor progress in changing health knowledge and practices of caregivers in Bara. The lot quality sampling technique is used to identify 19 households in each field area. Project staff conduct interviews with women aged 15-49 years and mothers with children 0-23 months of age. They then summarize survey results, discuss problems, and suggest solutions for each field area. They also combine findings for the seven field areas to generate results for the entire district. As a result of mid-term recommendations, the project
reduced the number of indicators used for monitoring from 50 to 15.

The M and E officer has been competently managing the information system for 8 years (began with previous CS project). Plan is currently looking for an M and E training update for him to attend in order to keep his skills current.

Dr. Thapa, Director of the Child Health Division who is the National Coordinator for IMCI likes the LQAS system and is currently using it for national immunization programming (the Plan Health Coordinator trained the Immunization Focal person in use of LQAS). LQAS is also being used in selected MOH districts as a monitoring tool.

C8. Technical and Administrative Support

Several organizations and individual consultants have given technical assistance to the project. Basic Support for Institutionalizing Child Survival II Project (BASICS II) helped train health facility staff in improving the quality and coverage of routine immunization. Trainers from the National Pediatric Society of Nepal conducted basic and follow-up training in Integrated Management of Childhood Illness. Individual consultants were hired to help develop the detailed implementation plan, to train staff in "transformation for health", and to evaluate the information, education, and communication strategy. Dr. Pierre-Marie Metangmo (Plan - USA) helped with the project start-off workshop and he,

along with Dr. Laban Tsuma and other colleagues from his office, conducted the CSSA Workshop with project and DHO staff, edited annual reports, answered technical and administrative questions, and shared technical materials with staff in Bara.

Project staff conducted an operational research study to assess the impact of pregnant women's groups in improving care-seeking behaviors. A comparison between PWG members and non-members showed 50 to 60 percent reductions in IMR, NMR, ENMR, PMR and MMR between those attending the PWGs and those pregnant women who did not. Project staff have also benefited from training in the Windows version of EpiInfo (an epidemiological and statistical software package designed by a team from the Centers for Disease Control and Prevention, Atlanta, Georgia).

C9. Mission Collaboration

According to interviews with USAID Mission personnel, it was clear that they really appreciate Plan's child survival accomplishments and related activities such as the LQAS training. USAID believes that the CS project is directly in line with the Mission Strategic Objective (SO) which is to reduce child mortality. A secondary objective is to reduce maternal mortality and increase use of family planning services. The CS project also targets both of these objectives through its interventions. In other areas, the strengthening of logistic and community supply systems also are in line with mission objectives.

Plan has also collaborated with the Mission to help with specific activities. For example when the Mission was having difficulty purchasing zinc for its projects, Plan was able to purchase it for them.

In Bara, the Child Health Officer participated in 3 meetings to strengthen health post level review meetings, determining Plan's and the DHO's roles. The mission and Plan staffs work together on several national working groups: FCHV, child health, nutrition, IMCI, etc. In addition, the Plan Health Coordinator is in weekly contact with the Mission Child Health Officer. Whenever there are low health indicators in Bara district, the CS project is contacted to respond and often USAID is involved.

There is also good collaboration between the CSP and the mission funded National Family Health Project (NFHP). For example, at the IMCI training update held in Bara this year, NFHP sent the facilitator and the CS project supported logistics for the meeting. Also an NFHP representative participated in the FE.

C10. Management Lessons Learned

According to project staff, the key management lessons learned are:

- The monthly review meetings with project staff have been a key management strategy. The project directors learned early on that in addition to the technical planning and evaluation tasks at the monthly meetings, it was key to spend time interacting with staff to learn their concerns and discuss the difficulties they were dealing with. The monthly meetings became a forum for sharing concerns, problem solving and strengthening the bonds between staff members. It seems to have worked well as there has been very little turnover among staff in the five years of project activity despite the tremendous difficulties of working in a conflict zone. The few who have left have moved on to more responsibility with Plan or other health projects.
- The management structure of the project did not change during the project LOP. Because of the well experienced staff and stable structure and procedures, the project was able to maintain its operations without interruption during the 6 month period after the first project director left and a new one was hired. An interim management team of 3 project managers was formed who, with support from Plan's Health Coordinator, were able to maintain day-to-day operations.

D. OTHER ISSUES IDENTIFIED BY THE TEAM

There were no other issues identified by the team.

E. CONCLUSIONS AND RECOMMENDATIONS

As can be seen from the Results Summary Chart in Section 1B the project has either met or surpassed almost all its goals and objectives. These outcomes are the result of the innovative strategies involving capacity building of DHO partner staff, community mobilization and a forthright and well monitored technical approach for reducing maternal and child morbidity and mortality in Bara District.

Some of the major achievements and strengths of the project include the strong relationship that the project has developed with the government of Nepal, particularly the Child Health Division and other key offices at the MOH such as Nutrition and Family Health. At the district level this has translated into an active and powerful partnership with the District Health Office and the district field staff, allowing the project to strengthen staff skills as well local health structures and systems including local financing through community drug programs. The CS project has also strengthened Plan's position in Nepal allowing it to have influence in the policy process in Nepal.

Another strength is the strengthening of Bara health facilities. At the beginning of the project most health facilities were not functioning but now 98 percent are operational including community drug programs.

The project has dramatically strengthened the Bara district communities despite the civil disruption caused by the Maoists insurgency throughout the project period. However because of innovative strategies such as holding monthly review of community data at local sub-district levels (since district staff could not travel to central offices for such meetings), the development of Pregnant Women's Groups to directly address issues of this target group, Child Groups to take advantage of an active mobilizing force in the communities, the project has either reached or surpassed most of its objectives.

Although the project is ending, Plan will continue to support health activities in Bara as well as its other programs. Since July 2005, the project began turning responsibilities over to the DHO. At this point, Plan is not as involved as it was but will continue to monitor district health activities building on its close relationship with the DHO. When needed Plan will work with the District to address problems and concerns. The new PHO has requested that Plan house one of it's staff in his office. Plan will also continue to build its health programming in the other 7 districts where it works in Nepal. Although Plan employs a more reduced level of effort in these districts than has been expended with the Bara CS project, it has applied the lessons learned from the CS project and worked closely with the MOH to implement successful strategies.

Although the CS project is ending, the evaluation team has a few recommendations for the remainder of the current project and for continuing child survival activities in the district.

- It is very important the monthly review meetings that have been installed in Bara district at the sub-district level continue and be supported by the DHO. Efforts should be made by the project to assure that the review meeting system is in place at the DHO before the close of the project. Currently the DHO is supporting the review meetings. Plan intends to continue using its staff to provide on going support for the CDP activities after the project ends. Although the CDPs are present and functioning in 94% of the district, some are new and need continued support to assure success. Plan may also want to consider scaling up this sub-district level review meeting model to its other districts.

- The review meetings in which facility service statistics are analyzed together with the records from FCHVs and the VHW registers, also need to incorporate LQAS monitoring data. The LQAS data should continue to be collected every 6 months. This will allow district personnel to understand where the service gaps and health needs are.

- Group approach. The project has had success in addressing project objectives by forming specific groups to address them. These include the Pregnant Women's Groups and Child Groups. These groups have been successful in motivating women to comply with the recommended visits for antenatal and postnatal care as well as improve immunization levels for children under 5. Given the continued concerns about neonatal mortality, it would be useful to work with these existing

groups on issues of newborn care or form pilot groups of mothers with newborns to assist them with breastfeeding, early child care and immunizations.

- Turnover of government MOH staff continues to be an issue. At the beginning of the project t it was about 20 percent (10 percent is the norm). Now it is 10 percent so the project has had a positive influence on this. However, Plan and the DHO will need to continue to work on maintaining good morale and motivating staff through on going training updates, sub-district and district level review meetings etc. The DHO stated that they needed to focus on regular field supervision now that the insurgency is over and it will be important as this is one of the few indicators that were not met by the project. It would be advisable for the project to work with the DHO to develop a plan for regular DHO field supervision before the close of project.

- Presently there is a peace accord between the government and the Maoists. However if that changes and the insurgency returns, the DHO will need assistance in development of strategies and negotiation skills to continue to provide community care.

- It would be useful in order to support future activity with the MOH, for Plan to provide negotiation skills training for Plan field staff. It is not always easy to work with the different personalities and convince government workers of the importance of learning new ways of providing care, acquiring new skills and doing accurate and timely reporting. Negotiation skills will also be important in dealing with the Maoists and other rural community leaders present in many of the villages as well.

- Currently the communications officer is writing a script for a video film that documents the community mobilization strategies used by the project including the formation of PWGs and child clubs. The MOH Director of Child Health and IMCI would like to use this as a training tool for MOH health workers to show how it is done. It is recommended that Plan complete this project for use by the MOH and others in Nepal who may benefit from the community mobilization lessons learned by the CS project. The evaluation team recognizes that this may not be completed before the end of the project but if Plan has the resources to finish it later, it would be a very useful tool for any future work it plans to conduct with the MOH. It would also be important to send this to the CSHGP office as a reference for other CS projects.

- The CS project has achieved and documented some important successes during the life of project. One of these is the results of the Pregnant Women's Group Impact Study. It would be useful to present these results at international meetings and/or publish them in relevant international health journals. It might also be useful to streamline the methodology and results of the Sustainability Assessment Framework Workshop (2006) and use it as an example of a tool that could be applied to similar projects in Nepal. It could serve as a tool for examining what

sustainable development means in Nepal and for highlighting what factors need to be addressed for improving sustainability. In the case of this assessment, the weakest areas were in the environmental index, which are mostly areas beyond the scope of the project, but within several domains that Plan addresses in its broader community projects. In its future activities, Plan may want to consider applying this framework to assess the feasibility of sustaining its projects within the broader context of its activities.

F. RESULTS HIGHLIGHTS

The Plan CS XVIII project in Bara has perfected the use of biannual LQAS monitoring for project indicators. During these surveys DHO staff, NGO partner staff and Bara Plan staff involve themselves through the entire process including the analysis. Thus the project has institutionalized LQAS monitoring process with the District Health System. Infact LQAS is now used by the Child Health Division of the MOH to assess national Immunization coverage. This was made possible through training offered to the National Immunization M&E focal point by Plan.

Forming and working with Pregnant Women Groups has been another project highlight. Each pregnant women's group consists of an average of 8-12 pregnant women. Female community health volunteers facilitate the groups and meetings are held once a month. The groups serve as a forum for discussion of health problems and for education of members and other women about pregnancy care and other maternal and child health topics. The women enjoy meeting and discussing pregnancy related concerns. They also develop community maps with their homes and dots indicating the services they have received, which they update at the meetings. Members receive prenatal care at local health facilities. Since the creation of the groups, health facility staff report increases of antenatal check-ups, iron and folic acid supplementation among pregnant and lactating women, postnatal vitamin A supplementation, prenatal tetanus toxoid vaccinations, and immunizations among children aged 12-23 months.

Plan Nepal also made a calculation of the number of lives saved between 2001 and 2006 (Lives Saved Analysis) in the Bara project area by use of the Bellagio calculator. The Bellagio Group on Child Survival represents many technical agencies. It published the 2003 Child Survival and 2005 Neonatal Survival articles in the Lancet. The Bellagio group estimated the percentage of deaths attributable to the six most common causes of child mortality (diarrhea, pneumonia, measles, malaria, HIV/AIDS and neonatal causes) in 42 high mortality countries including Nepal. It reviewed the literature for interventions supported by the evidence as effective against these six main causes and estimated the effect size of these interventions from the literature. The calculator estimates the number of deaths attributable to the six main causes and accounts for both the effects of malnutrition on mortality and the effect of interventions on multiple conditions (e.g. Vitamin A reduces measles, diarrhea and malaria deaths). It also avoids double counts. Lives saved for each intervention is given by the product of baseline number of deaths for that cause, intervention effectiveness and change of coverage.

The project was able to save 1302 lives in the course of its 5 years which approximates to under $1000 per life saved.

In the last year of the project alone it is estimated that it saved 259 lives from diarrhea, 162 lives from pneumonia, 97 lives from neonatal causes and 3 lives from measles for a total of 521 lives saved.

This makes the project a highly efficient program worth emulation in the region.

ATTACHMENTS

5A. Evaluation Team Members and Their Titles
5B. Evaluation Assessment Methodology
5C. List of Persons Interviewed and Contacted
5D. Training Completed by Project
5E Pregnant Women's Group Impact Study
5F. Interview Questionnaires
5G. LQAS Results – Comparison of Coverage for 7 Time Periods

ATTACHMENT 5A: EVALUATION TEAM MEMBERS AND THEIR TITLES

List of Final Evaluation participants

SN	Name	Position & Organization
1	Dr. Pierre-Marie Metangmo	Health Coordinator, Plan IH
2	Dr. Sunlal Thapa	National IMCI Coordinator, Child Health Division, Ministry of Health and Population
3	Dr. Ram Lakhan Shah	District Health Officer, Bara
4	Mr. Parsuram Shrestha	District Public Health Officer, Bara
5	Dr. Chandra Kumar Sen	District Program Coordinator – Plan Nepal Rautahat/Bara PU
6	Arjun Nepal	Coordinator, NFHP, Bara
7	Dr. Kedar Baral	National Health Coordinator, Plan Nepal Country Office
8	Bhagawan Das Shrestha	CS Project Coordinator
9	Shusil Joshi	Research Officer, Plan Nepal Country Office
10	Subarna Raj Gurung	Training Coordinator, Plan Nepal, CS Project
11	Dipak Dahal	Health Information System Coordinator, Plan Nepal, CS Office
12	Lava Raj Timilsina	CS Project Coordinator, Care Nepal, Doti
13	Sandra Wilcox	External Consultant

ATTACHMENT 5B: EVALUATION ASSESSMENT METHODOLOGY

On the first day the consultant and the headquarters Child Survival Coordinator, Dr Pierre Marie Metangmo, met with the Plan Health Program Coordinator (Dr Kedar Baral) in Kathmandu to review schedules and information and plan activities for the evaluation in Bara District. Following this, during a one day workshop in Bara core team members worked with staff from Plan, Ministry of Health, and other partners to plan the evaluation, develop data collection instruments, and discuss pertinent issues. Dr. Kedar Baral presented findings of a quantitative assessment of project progress through June 2006 (based on lot quality surveys conducted twice every year). Additional information was presented by Dr. Bhagawan Das Shrestha, the Project Coordinator.

Workshop participants then regrouped into three field teams (led by Dr. Kedar Baral, Dr. Ram Lakhan Shah, and Dr. Sun Lal Thapa) to visit health facilities, interview health personnel, and carry out focus group discussions with women and children in project communities over a two-day period. Findings were compiled in the evenings and shared with the consultant.

The consultant conducted a group discussion with Plan Community Health Officers and Assistant Community Health Officers to understand the challenges they face in their work and hear their recommendations and suggestions for the future. In addition, she interviewed staff from Plan, Ministry of Health, and other partners in the district and in Kathmandu.

Kedar Baral, Pierre Marie Metangmo and the consultant conducted two debriefing sessions, one for Plan and another one for USAID Nepal. In both these meetings, the consultant also received input from Plan and USAID regarding concerns and recommendations for future CS related activity in Nepal.

ATTACHMENT 5C: LIST OF PERSONS INTERVIEWED AND CONTACTED

Bagwan SHP Date: 2nd August 2006

1. Sazad Ansari – Sub Health post Incharge
2. Mrs. Kabita Aryal (teacher),

VDC: Basatpur: Date: 4th Aug 2006

1. Shaily Devi Saha, FCHV
2. Laxman Prasad Yadav – VHW
3. Anil Kumar Pandey - AHW
4. Bacha Singh - health facility committee member
5. Manjo Kumar Yadav - health facility committee member
6. Atiullah Ansari - community key informant

VDC: Kuduwa: Date: 3nd Aug 2006

1. Mrs Radhika Devi Yadav – FCHV
2. Gita Kumari Sahani – MCHV
3. Ram.K .Yadav – AHW
4. Mahavir Mukhiya - community key informant
5. Ganga Dev Yadav - community key informant

Uttar Jhitkaiya SHP: Date: August 4, 2006

1. Birendra Kumar Mahato – VHW
2. Paspat Kunwar – AHW
3. Surendra Ram - community key informant

VDC: Bhaluhibharbhaliya:

1. Sona Devi Baitha – CHV
2. Bidhya Laxmi Maharjan – MCHW
3. Ram Bidhaya Prasad Kusuwaha SHP Incharge
4. Mr. Ram Chandra Pd. Kanu – key informant

Sapahi SHP

1. Hari Maya Tamang - FCHV
2. Krishna Kumari Ray - MCHW
3. Parasnath Chaudhary – AHW
4. Mr. Krishna Chandra Neupnae – key informant

Nijgadh – 2 August 2006

Community Based Maternity Home committee members

1) Kishor Nepal – Vice Chairperson
2) Pravat Sigdel – Joint Secretary
3) Bishnu Lama – Member

FCHV (6): Shreemaya Thada Magar
Mother's groups' chairperson: Tara Bhatta

Simara PHC – 3 August 2006

1) Naina Pathak (Staff Nurse) – Acting Incharge
2) Ashok Jaiswal – Health Assistant

Dumarwana SHP – 3 August 2006

1) Dev Prasad Pyakurel (AHW) – In-charge
2) Sabitri Adhikari – VHW
3) Mina Begam – FCHV, Ward # 8

FCHV (6) – Bhawani Pokharel
Mother's Group's chairperson & TBA (6) – Kamala Adhikari

Fattepur – 9 (Amadar Tole) – 3 August 2006

1) Chairperson of Child Club (Jan Sewa Bal Club) – Yosodha
2) Secretary – Akur

Rampurwa HP – 4 August 2006

Incharge – Md. Sabir
Health Management Committee chairperson – Ram Prasad Chaudhary
FCHV (6) – Rupi Chaudhary
Mother's groups' chairperson – Sabita Chaudhary

ATTACHMENT 5D: TRAINING COMPLETED BY PROJECT

Plan Nepal
Rautahat/Bara Program Unit
Child Survival Project Kalaiya

Major training and workshop conducted by Child Survival Project from 2001 to 2006 (Health Facilities and community)

Sn	T/W	Name of Event	Level	Duration	# of Batch	# of Participants	Date
1	T	GTOT	HF staff	5 Days	5	95	Feb - May 02
2	WT	FP/MNC Training	HF staff	4 Days	1	18	Mar-02
3	T	FP/MNC Training	SHP staff	7 Days	5	105	Apr-May 02
4	T	FP/MNC Training	TBAs	12 Days	9	187	Apr - May 02
5	T	IMCI Training	PHC/HP/SHP	10 Days	9	149	Apr - Jul 02
6	T	FP/MNC Training	FCHVs	7 Days	39	725	May - June 02
7	T	FP/MNC Training	VHW/MCHW	7 Days	5	126	May - June 02
8	T	IMCI Training	Non Technical	5 Days	1	16	July - Aug 02
9	T	Transformation for Health Training	HF staff	5 Days	1	3	Oct-02
10	T	IMCI Training Follow up	PHC/HP/SHP	2 Days	98	149	Nov- Dec 02
11	T	FP/MNC Training	FCHV/TBAs	2 Days	48	1142	Feb - March 03
12	T	IMCI Training	VHW/MCHW	7 Days	6	168	Aug -Sep 03
13	T	FP/MNC Refresher Training	FCHV/TBAs	2 Days	47	1018	Sep-03
14	T	TBA Basic Training (New)	TBAs	13 DSays	1	23	Sep-03
15	T	Infection Control Training	Helper	3 Days	4	64	Oct-03
16	T	IMCI Refresher Training	FCHV	3 Days	47	884	Nov -Dec 03

17	T	Street drama Training	Child Club Member	3 Day	4	109	Dec-03
18	T	CDP TOT	HF staff	4 Days	1	23	Mar-04
19	T	CDP Training	SHP staff	4 Days	7	146	Mar - Apr 04
20	T	HMIS Training	Clerk	4 Days	1	12	Mar-04
21	T	IMCI Refresher Training	FCHVs	2 Days	47	884	May - June 04
22	T	COFP counseling training	MCHW	4 Days	2	57	Dec-04
23	T	Healthy school Promotion Training	School Children	3 Days	4	360	Dec 03- Jan 04
24	T	ROC Training	Child Club Member	5 Days	18	602	Dec 03 - Feb 04
25	T	Healthy school Promotion Training	School Children	3 Days	22	662	Jan-05
26	W	Rational Use of Drug	Drug Retailers	1 Day	1	28	Jan-05
27	T	CDP Training	Mgmt Committee	3 Day	49	1076	Feb - March 05
28	T	FP/MNC Training	FCHV/TBAs	2 Days	48	1048	Mar-05
29	T	IMCI Refresher Training	FCHVs	2 Days	47	884	May - June 05
30	T	LQAS Training	District Supervisor	9 Days	1	10	Jul-05
31	T	IMCI Refresher Training	FCHVs	2 Days	48	884	Sep-05
32	W	Iodized salt Promotion Orientation	Shop Keeper	1 Day	8	209	Sep-05
33	T	ROC Training	Child Club Member	5 Days	13	396	Nov - Dec 05
34	T	FP/MNC Training	FCHV/TBAs	2 Days	47	1048	Dec-05
35	W	Iron Intensification Workshop	HF staff	1 Day	2	36	Dec-05
36	TW	School Health Promotion Workshop	School Children	3 Days	19	573	Dec-05
37	T	FCHV Refresher training on New Approach (DTOT)	HF staff	7 Days	1	22	Jan-06
38	T	Iron Intensification Training	FCHVs	2 Days	15	884	Jan- Mar 06
39	T	Iron Intensification Training	VHW/MCHW	2 Days	15	170	Jan-Mar 06
40	T	FP/MNC Training	FCHV/TBAs	2 Days	47	1048	Feb - Mar 06

41	T	IMCI Training (Transferred staff)	HF staff	3 Days	2	42	Mar-06
42	T	FCHV Basic Training	FCHVs	9 Days	5	121	Apr - May 06
43	T	FCHV Refresher New Approach	FCHVs	5 Days	44	766	Apr-06
44	T	HMIS Training	SHP Incharge	3 Days	6	138	April - June 06
45	T	FCHV Refresher New Approach	FCHVs	5 Days	44	766	May -June 06
46	T	LQAS Training	District Supervisor	9 Days	1	10	Jun-06
47	T	ROC Refresher	Child Club Member	2 Days	30	900	Nov 05 - May 06
48	T	HMIS Training	HF staff	5 Days	1	22	Dec 05- Jan 06
49	W	Iron Intensification Workshop	SHP staff	1 Day	8	114	Jan-06
50	W	CSSA workshop	HF staff / Community	1 Day	1	20	Jul-06
51	W	Behave Training	Project Staff	5 Days	1	2	Mar-06

ATTACHMENT 5E: PREGNANT WOMEN'S GROUP IMPACT STUDY

Plan Nepal Rautahat/Bara Program Unit - August 2006

I. Introduction

A comparison between PWG members and non-members showed 50 to 60 percent reductions in IMR, NMR, ENMR, PMR and MMR between those attending the PWGs and those pregnant women who did not.

II. Distribution of birth and deaths PWG and non-PWG members

Category	Total	PWG Member		Source of Information			
		Yes	No	Register	VHW/ MCHW	FCHV/ TBA	Community
Live Birth	14,923	4,335	10,588	14,504	2	341	76
Still Birth	249	41	208	205	7	22	15
Spontaneous Abortion	48	11	37	43	0	4	1
Maternal Live	15,167	1,378	10,789	14,704	9	364	90
Maternal Death	77	12	65	67	0	6	4
Infant Death (Total death)	717	108	609	594	7	68	48
Death of child <7 days	438	72	366	368	2	37	31
Death of Child <28 days	497	81	416	414	2	45	36
Death of Child 8-28 days	59	9	50	46	0	8	5
Death of Child between 29-365 days	195	21	174	159	5	19	12

III. Mortality indices of Bara district compared with national estimates

Mortality rates	PWG	Non-PWG	Total	National
IMR / 1,000 LB	25.2	57.9	48.4	61
NMR / 1,000 LB	18.9	39.6	33.6	36
ENMR / 1,000 LB	16.8	34.8	29.6	
PMR / 1,000 LB	26.1	53.4	45.1	
MMR / 100,000	279.7	608.7	513.4	539

IV. Comparison of Mortality rates in PWG and non-PWG members

Mortality rates	PWG	Non-PWG	Odds Ratio (95% CI)	p-value
IMR / 1,000 LB	25.2	57.9	2.38 (1.92-2.95)	<0.0001
NMR / 1,000 LB	18.9	39.6	2.14 (1.67-2.74)	<0.0001
ENMR / 1,000 LB	16.8	34.8	2.10 (1.63-2.75)	<0.0001
PMR / 1,000 LB	26.1	53.4	2.11 (1.71-2.60)	<0.0001
MMR / 100,000	279.7	608.7	2.18 (1.14-2.93)	<0.02

ATTACHMENT 5F: INTERVIEW QUESTIONNAIRES

(Final Evaluation Questionnaires)

Community-based Volunteers

1. How long have you been working as a volunteer?
2. What training was most helpful on your day to day work? (CB-IMCI)
3. How has the training helped you in your work?
4. Who comes to support you in completing your activities? How often do you receive support?
5. How have their visits been helpful to you?
6. When did people from community last visit you to get any health services or commodities? Tell me about the visit.
7. How does the community support you in your work?
8. What problems do people face in using your services?
9. What problems do you face in your day-to-day work? How are these resolved?
10. How has your ability to deliver services improved in the last 2 years?
11. What materials do you have to educate people in the community? How do you use them?
12. What commodities do you sell? How much do you charge for them?
13. Who decided that these commodities could be sold in the community?
14. How do you get supplies (such as oral rehydration solution packets, iron tablets, vitamin A, family planning supplies)?
15. How do community members feel about the selling of supplies?
16. How often do you meet as a group and how do you plan your activities?
17. How does the health facility support you in your work?
18. How does the Village Development Committee support you in your work?
19. How can the support you receive be improved?
20. What changes have occurred in the health status of the community in your area in the last two years?
21. How do you plan to continue your work after the Child Survival project finishes?
22. How can Child Survival project activities be improved in the future?

VHW/MCHW

1. How long have you been working as a health worker?
2. What training was most helpful on your day to day work? How?(CB-IMCI)
3. How has the training helped you in your work?
4. What are your activities?
5. How often do you provide support to community-based volunteers? What are the areas of support (mothers' groups, supplies etc)?
6. How many mothers' groups and pregnant women's groups are there in your village development committee? How often do you attend their meetings?
7. How has your ability to deliver services improved in last 2 years?

8. What educational materials have you received? How do you use them to educate community members?
9. How would you like to improve your services?

Chief of Health Facility

1. In what heath related activities have you involved the community?
2. Describe the participation of community members in these activities.
3. What barriers have you faced in mobilizing communities? Give an example of how you solved them.
4. How effective is the project's behavior change communication approach?
5. How has the health facility improved over the last two years? Give an example.
6. How will Child Survival project activities continue after the project finishes?
7. What tools do you use for training needs assessment?
8. What types of method do you use for training?
9. How do you follow-up with participants after training?
10. How frequently do you supervise staff members who report to you?
11. What methods do you use during supervision?
12. Please give an example of a work-related problem faced by your staff during the last month. Tell me how it was solved.
13. What health-related information do you and your staff collect? How frequently are these collected? How are they analyzed?
14. How do you use the information to track the effectiveness of the project?
15. How is the information helpful in decision making?
16. What training was most useful?
17. Have you received training in community-based integrated management of childhood illness?
18. How are you using the skills you learned during the training?
19. What are the benefits of community-based integrated management of childhood illness?
20. How can community-based integrated management of childhood illness be improved?
21. How is community-based integrated management of childhood illness helping other national health programs?

Health Facility Committee member

1. When was the committee formed?
2. How many members in the committee?
3. How frequently are you meeting?
4. When was the last meeting?
5. What was discussed and decided?
6. Do you have segregation duty (work division) or not?
7. How you contributing for the health program
8. Do you have CDP program?
9. When was the CDP program started?

10. Do you have banking operation or not?
11. How much money do you have now?
12. Was their a stock out in the last 3 months?
13. How do you decide when to purchase new drug?
14. Do you have the problem to implementing the CDP program?
15. How would you improve the health program including CDP?

Mother's group

1. When and how was the mother's group formed?
2. How often are the meetings?
3. Who facilitate the meeting?
4. When was the last meeting?
5. What was discussed in the meeting?
6. How do you help the FCHV?
7. How is the FCHV helping the group?
8. Are their other interest groups in the ward like pregnant women and child club etc.?
9. If yes, how are they collaborating to other groups?
10. Are you happy with the health service provider?
11. What are the suggestions for better health service?

Pregnant Women's Group/Child Club and other groups

1. When and how was the pregnant mother's group formed?
2. How often are the meetings?
3. Who facilitate the meeting?
4. When was the last meeting?
5. What was discussed in the meeting?
6. How do you help the FCHV?
7. How does the FCHV help the group?
8. What is the advantage of being in-group?
9. Are you happy with the health service provider?
10. What are the suggestions for better health service?

Community key informant

1. Do you know the child survival project?
2. If yes, what are the major actives in your village?
3. Who provides the pneumonia cases treatment in your ward?
4. Where the EPI out reach side?
5. Who and when was EPI service provided?
6. Have you been involved in any kind of health activities?
7. If yes, what are they?
8. Do you know who the FCHV in your ward is and what is her role?
9. Do you have any suggestion for the further improvement in the health services?

ATTACHMENT 5G: LQAS Results – Comparison of Coverage for 7 Time Periods

Table 5: Comparison of coverage proportion for key indicators collected between seven-time period *(first, second, third, fourth, fifth, sixth, seventh, eighth LQAS* - ***From October 2001 to Jun 2006*)**

SN	Mod #	Indicator	Indicator/Definition	Baseline (LQAS) **Oct'01**	Confidence Interval ± **CI**	LQAS **Jan'03**	Confidence Interval ± **CI**	LQAS **Jul'03**	Confidence Interval ± **CI**	LQAS **Jan'04**	Confidence Interval ± **CI**	LQAS **Jul'04**	Confidence Interval ± **CI**	LQAS **Jan'05**	Confidence Interval ± **CI**	LQAS **Jul'05**	Confidence Interval ± **CI**	LQAS **Jun'06**	Confidence Interval ± **CI**
BREAST FEEDING AND CHILD NUTRITION INDICATORS																			
1	M1	Breastfeeding Initiation	Percent of children aged 0-11 months who are breastfed with in the first hour after birth	**9**	**4.87**	**18**	**6.58**	**29**	**7.74**	**32**	**7.90**	**36**	**8.16**	**40**	**8.32**	**48**	**8.49**	**66**	**8.04**
2	M1	Exclusive Breast-feeding Rate	Percent of infants aged 0-5 months who were fed breastfed milk only in the last 24 hours	**62**	**8.26**	**95**	**5.15**	**83**	**8.94**	**90**	**6.73**	**75**	**11.58**	**93**	**6.03**	**80**	**10.41**	**100**	
3	M1	Complementory Feeding Rate	Percent of infant aged 6-9 months who received breast milk and solid foods in the last 24 hours	**73**	**15.82**	**64**	**15.69**	**82**	**10.84**	**81**	**13.91**	**81**	**9.70**	**87**	**9.54**	**88**	**9.18**	**96**	**4.81**
4	M2	Continued breast feding	Percent of children aged 20-23 months who are still breast feeding	**77**	**14.72**	**87**	**11.80**	**74**	**14.48**	**78**	**15.68**	**89**	**9.18**	**95**	**9.55**	**88**	**11.14**	**85**	**12.23**
5	M2	Vitamin "A" Coverage	Percent of Children aged 6-23 months who received a vitamin A does in the last six months	**91**	**4.17**	**88**	**4.68**	**98**	**2.07**	**98**	**2.52**	**97**	**2.90**	**99**	**1.47**	**95**	**3.80**	**99**	**1.47**

CHILDHOOD IMMUNIZATION INDICATORS																			
6	M2	Possession of vaccination Card	Percent of children aged 12-23 months who have a Vaccination Card	**19**	**6.64**	**25**	**7.34**	**36**	**8.16**	**44**	**8.43**	**51**	**8.50**	**59**	**8.35**	**59**	**8.35**	**74**	**7.41**
7	M2	EPI Access	Percent of children aged 12-23 months who received DPT 1	**16**	**6.20**	**18**	**6.54**	**35**	**8.12**	**43**	**8.41**	**50**	**8.50**	**59**	**8.35**	**56**	**8.44**	**71**	**7.68**
8	M2	RAPID Catch Indicator: Measles Vaccination Coverage	Percent of children aged 12-23 months who received measles vaccine	**11**	**5.22**	**14**	**5.81**	**29**	**7.68**	**38**	**8.26**	**41**	**8.35**	**52**	**8.49**	**53**	**8.49**	**72**	**7.62**
9	M2	Droup Out Rate	Percent of drop out- rates between DPT1 and DPT 3	**14**	**14.97**	**17**	**14.91**	**2**	**4.04**	**10**	**7.84**	**6**	**5.59**	**5**	**4.83**	**5**	**5.15**	**3**	**3.38**
10	M2	Rapid Catch Indicator EPI Coverage	Percent of children aged 12-23 months who received BCG, DPT3, OPV3 and measles vaccines before the first birthday	**10**	**5.05**	**11**	**5.38**	**29**	**7.68**	**34**	**8.04**	**40**	**8.32**	**52**	**8.49**	**50**	**8.50**	**67**	**8.00**
11	M2	EPI Coverage II (Liberal Criteriaon)	Percent of children aged 12-23 months who received OPV 3	**14**	**5.95**	**16**	**6.20**	**35**	**8.08**	**37**	**8.20**	**48**	**8.49**	**56**	**8.43**	**55**	**8.46**	**72**	**7.62**
SICK CHILD																			
12	M1 & M2	Maternal Knowledge of child danger sign	Percent of mothers of children aged 0-23 months who know at least **THREE** signs of childhood illness that indicate the need for treatment	**73**	**5.34**	**62**	**5.83**	**80**	**4.77**	**83**	**4.51**	**90**	**3.57**	**95**	**2.68**	**97**	**1.92**	**98**	**1.78**
DIARRHEA INDICATORS																			
13	M1 & M2	Diarrhea prevalence	Percent of children aged 0-23 months with diarrhea in the last two weeks	**20**	**4.83**	**18**	**4.58**	**17**	**4.51**	**20**	**4.77**	**17**	**4.54**	**17**	**4.51**	**22**	**4.96**	**21**	**4.87**

14	M1 & M2	ORT use during a Diarrhea Episode	Percent of children aged 0-23 months with diarrhea in the last two weeks who received oral rehydration solution (ORS) and/ or recommended home fluids (RHF)	**16**	**9.78**	**13**	**9.54**	**36**	**13.99**	**35**	**12.93**	**46**	**14.39**	**31**	**13.53**	**57**	**12.75**	**60**	**12.95**
15	M1 & M2	Increased breastfeed During a Diarrhea Episode	Percent of children aged 0-23 who received breastfed same amount or more during diarrhea in last two weeks.	**62**	**12.84**	**62**	**13.90**	**82**	**11.17**	**87**	**9.28**	**87**	**9.73**	**89**	**9.18**	**90**	**7.84**	**95**	**6.00**
16	M1 & M2	Increased drink during a diarrhea Episode	Percent of children aged 0-23 months with diarrhea in the last two weeks who were offered the same amount or more drink / fluid during the illness	**24**	**11.23**	**34**	**13.55**	**71**	**13.24**	**63**	**13.09**	**83**	**10.95**	**76**	**12.56**	**91**	**7.22**	**93**	**6.86**
17	M1 & M2	Increased food during a diarrhea Episode	Percent of children aged 0-23 months with diarrhea in the last two weeks who were offered the same amount or more food during the illness	**27**	**11.77**	**28**	**12.79**	**62**	**14.17**	**54**	**13.55**	**70**	**13.30**	**67**	**13.77**	**81**	**10.09**	**95**	**6.00**
18	M1 & M2	Care–seeking for Diarrhea	Percent of Children aged 0-23 months with diarrhea in the last two weeks whose mothers Sought outside advice or treatment for the illness	**76**	**11.23**	**72**	**12.79**	**80**	**11.69**	**81**	**10.71**	**80**	**11.46**	**80**	**11.69**	**71**	**11.71**	**91**	**7.60**
19	M2	Maternal Competency in ORS Preparation	Percent of mothers who can correctly prepare ORS	**34**	**8.60**	**39**	**8.29**	**64**	**8.16**	**71**	**7.74**	**74**	**7.41**	**67**	**8.00**	**75**	**7.34**	**84**	**6.20**
20	M2	Maternal Hand Washing before Food Preparation	Percent of mothers who usually wash their hands with soap or ash before food preparation.	**23**	**7.10**	**22**	**7.02**	**40**	**8.32**	**64**	**8.16**	**61**	**8.29**	**77**	**7.19**	**81**	**6.64**	**92**	**4.68**

21	M2	Maternal Hand Washing before Food Preparation before feeding /after attending to a child who has defecated	Percent of mothers who usually wash their hands with soap or ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated.	**5**	**3.80**	**4**	**3.23**	**18**	**6.54**	**26**	**7.41**	**33**	**8.00**	**50**	**8.50**	**47**	**8.49**	**78**	**7.02**
ARI IDICATOR																			
22	M1 & M2	ARI Care - seeking	Percent of Children aged 0-23 months with cough and fast / difficult breathing in the last two weeks who were taken to a health facility or received treatment.	**79**	**9.99**	**73**	**10.82**	**75**	**9.89**	**61**	**9.71**	**45**	**9.39**	**51**	**10.44**	**93**	**8.16**	**80**	**14.31**
PRENATAL CARE INDICATORS																			
23	M1	Maternal Health Card Presentation	Percent of mothers with a maternal card (Card-confirmed) for the youngest child less than 12 months of age	**17**	**6.43**	**22**	**7.02**	**26**	**7.48**	**24**	**7.26**	**30**	**7.79**	**21**	**6.93**	**31**	**7.85**	**65**	**8.12**
24	M1	Tetanus Toxoid Coverage	Percent of mothers who received at least **TWO** tetanus toxoid injections (Card confirmed) before the birth of the youngest child less than 12 months of age.	**13**	**5.67**	**21**	**6.93**	**18**	**6.80**	**20**	**7.16**	**24**	**7.44**	**22**	**7.26**	**32**	**8.18**	**63**	**8.20**
25	M1	Prenatal Care Coverage	Percent of mothers who had at least **ONE** prenatal visit prior to the birth of her youngest child less than 12 months of age	**45**	**8.46**	**53**	**8.48**	**56**	**8.43**	**66**	**8.04**	**68**	**7.95**	**65**	**8.08**	**74**	**7.48**	**78**	**7.02**
26	M1	Iron Supplimentation Coverage	Percent of mothers who received /brought iron supplements while pregnant with the youngest child less than 12 months of age.	**36**	**13.30**	**53**	**8.48**	**74**	**7.41**	**77**	**7.19**	**83**	**6.31**	**79**	**6.93**	**87**	**5.67**	**93**	**4.27**

PLACE OF DELIVERY AND DELIVERY ATTENDED																			
27	M1	Delivery by skilled Health Personnel	Percent of children aged 0-11 months whose delivery was attended by a skilled health personal upto TBA level	**32**	**7.95**	**47**	**8.49**	**53**	**8.48**	**68**	**7.90**	**65**	**8.08**	**63**	**8.20**	**68**	**7.95**	**77**	**7.19**
28	M1	Delivery by skilled Health Personnel	Percent of children aged 0-11 months whose delivery was attended by a skilled health personal upto MCHW level									**33**	**8.00**	**30**	**7.79**	**40**	**8.32**	**42**	**8.39**
29	M1	Clean Cord Care	Percent of children aged 0-11 months whose delivery involved use of a clean birth kit or whose cord was cut with a new razor	**96**	**3.23**	**95**	**3.53**												
30	M1	Clean Cord Care	Percent of children aged 0-11 months whose delivery involved use of a clean birth kit					**30**	**7.79**	**51**	**8.50**	**53**	**8.49**	**78**	**7.02**	**73**	**7.55**	**75**	**7.34**
31	M1	Immediate Breast Feeding	Percent of children aged 0-11 months who were immediately breastfed with the mother immediately after birth.	**2**	**2.52**	**14**	**5.95**												
32	M1	Placement at Birth	Percent of children aged 0-11 months who were placed with the mother immediately after birth	**25**	**7.34**	**28**	**7.62**	**51**	**8.50**	**66**	**8.04**	**74**	**7.48**	**70**	**7.79**	**74**	**7.48**	**82**	**6.54**
POSTPARTUM CARE																			
33	M1	Postpartum Contact	Percent of mother who had at least **ONE** postpartum check-up	**11**	**5.38**	**14**	**5.81**	**15**	**6.07**	**31**	**7.85**	**41**	**8.35**	**40**	**8.32**	**48**	**8.49**	**63**	**8.20**

34	M1	Knowledge of maternal Danger Signs	Percent of mothers able to report at least **TWO** known maternal danger signs during the postpartum period	**41**	**8.37**	**52**	**8.49**												
35	M1	Knowledge of Neonatal Danger Signs	Percent of mothers able to report at least **THREE** known neonatal danger signs					**91**	**4.87**	**90**	**5.05**	**95**	**3.80**	**94**	**4.04**	**94**	**4.04**	**98**	**2.07**
36	M1	Knowledge of Neonatal Danger Signs	Percent of mothers able to report at least **TWO** known neonatal danger signs	**71**	**7.68**	**87**	**5.67**	**96**	**3.23**	**98**	**2.52**	**98**	**2.07**	**98**	**2.52**	**97**	**2.90**	**98**	**2.07**
37	M1	Maternal Vitamin A supplementation	Percent of mothers who received a Vitamin A dose during the first six weeks after delivery	**16**	**6.20**	**17**	**6.43**	**34**	**8.04**	**42**	**8.39**	**50**	**8.50**	**59**	**8.35**	**67**	**8.00**	**80**	**6.74**
38	M1	Maternal iron supplementation	Percent of mothers who received at least 1 month iron tablets during the first two months after delivery	**10**	**5.05**	**28**	**7.62**	**42**	**8.39**	**52**	**8.49**	**45**	**8.46**	**48**	**8.49**	**62**	**8.26**	**75**	**7.34**
CHILD SPACING																			
39	M3	Contraceptive Use Among Mothers Who Want to limit or space births	Percent of non pregnant mothers who desire no more children in the next two years or are not sure, who are using a modern method of child spacing	**24**	**7.54**	**32**	**7.90**	**44**	**8.44**	**43**	**8.41**	**46**	**8.47**	**55**	**8.46**	**40**	**8.32**	**66**	**8.04**
40	M3	Knowledge of source of Child spacing methods	Percent of mothers who report at least one place where she can obtain a method of child spacing	**54**	**8.47**	**71**	**7.74**	**81**	**6.64**	**93**	**4.27**	**97**	**2.90**	**98**	**2.52**	**98**	**2.07**	**100**	
41	M3	Adequate birth interval between surviving children	Percent of children aged 0-23 months who were born at least 24 months after the previous surviving child	**58**	**11.10**	**58**	**10.96**	**56**	**10.74**	**68**	**11.37**	**59**	**12.34**	**67**	**10.78**	**76**	**9.42**	**69**	**12.90**

42	M3	Adequate Birth interval Between youngest Surviving Children (Less Stringent Criteria)	Percent of children aged 0-23 months who were born at least 36 months after the previous surviving child	**12**	**7.26**	**13**	**7.42**	**21**	**8.77**	**23**	**10.24**	**41**	**12.34**	**38**	**11.15**	**32**	**10.26**	**14**	**9.80**
KNOWLEDGE OF DANGER SIGNS DURING PREGNANCY, POSTNATAL AND NEW BORN CHILD																			
43	M1	Danger signs/ symptoms during pregnancy	Percent of mothers (15-49 years) who know at least **TWO** danger signs/symptoms during pregnancy	**29**	**7.68**	**41**	**8.35**	**87**	**5.67**	**90**	**5.05**	**95**	**3.80**	**95**	**3.53**	**95**	**3.53**	**100**	
44	M1	Danger signs/ symptoms during pregnancy	Percent of mothers (15-49 years) who know at least **THREE** danger signs/symptoms during pregnancy	**26**	**7.48**	**41**	**8.35**	**69**	**7.85**	**74**	**7.48**	**85**	**6.07**	**84**	**6.20**	**92**	**4.48**	**99**	**1.47**
45	M1	Danger signs after delivery	Percent of mothers who knows at least **TWO** danger signs/ symptoms of after delivery	**41**	**8.37**	**52**	**8.49**			**80**	**6.74**	**86**	**5.81**	**92**	**4.48**	**93**	**4.27**	**98**	**2.07**
46	M1	Danger signs after delivery	Percent of mothers who knows at least **THREE** danger signs/ symptoms of after delivery	**11**	**5.22**	**62**	**8.23**			**59**	**8.37**	**75**	**7.34**	**76**	**7.26**	**89**	**5.22**	**95**	**3.80**
47	M1	Danger signs of new born	Percent of mothers who know at least **TWO** danger sign of new born	**71**	**7.68**	**87**	**5.67**	**96**	**3.23**	**98**	**2.52**	**98**	**2.07**	**98**	**2.52**	**97**	**2.90**	**98**	**2.07**
48	M1	Danger signs of new born	Percent of mothers who know at least **THREE** danger sign of new born	**37**	**8.20**	**62**	**8.23**	**91**	**4.87**	**90**	**5.05**	**95**	**3.80**	**94**	**4.04**	**94**	**4.04**	**98**	**2.07**
DANGER SIGNS OF PNEUMONIA AND DIARRHEA																			
49	M2	Danger signs/ symptoms of pneumonia	Percent of mothers who know at least **THREE** danger signs/ symptoms of pneumonia	**15**	**6.07**	**39**	**8.29**	**71**	**7.74**	**85**	**6.07**	**90**	**5.05**	**90**	**5.05**	**92**	**4.68**	**98**	**2.52**

50	M2	Danger signs / symptoms of diarrhea/ dysentery	Percent of mothers who know at least **THREE** danger sign of diarrhea / dysentery	**14**	**5.95**	**17**	**6.31**	**50**	**8.50**	**62**	**8.26**	**69**	**7.85**	**77**	**7.10**	**85**	**6.07**	**92**	**4.48**
KNOWLEDGE ON HIV/AIDS/STD																			
51	M3	Knowledge about HIV/AIDS and STD transmission	Percent of mothers who knows at least **ONE** HIV/AIDS and STD transmission (MOT)	**14**	**5.95**	**18**	**6.54**	**28**	**7.62**	**37**	**8.20**	**42**	**8.39**	**47**	**8.49**	**53**	**8.49**	**68**	**7.95**
52	M3	Knowledge about HIV/AIDS and STD Prevention	Percent of mothers who knows at least **ONE** HIV/AIDS and STD prevention (MOT)	**14**	**5.95**	**17**	**6.31**	**26**	**7.48**	**36**	**8.16**	**42**	**8.39**	**46**	**8.47**	**53**	**8.49**	**69**	**7.85**

Table 6: Rapid Core Assessment Tool for Child Health (CATCH) *from October 2001 to June 2006*

SN	Mod #	Indicator	Indicator/Definition	Baseline (LQAS) **Oct'01**	Confidence Interval ± **CI**	LQAS **Jan'03**	Confidence Interval ± **CI**	LQAS **Jul'03**	Confidence Interval ± **CI**	LQAS **Jan'04**	Confidence Interval ± **CI**	LQAS **Jul'04**	Confidence Interval ± **CI**	LQAS **Jan'05**	Confidence Interval ± **CI**	LQAS **Jul'05**	Confidence Interval ± **CI**	LQAS **Jul'06**	Confidence Interval ± **CI**
SENTINEL MEASURE OF CHILD HEALTH AND WELL-BEING																			
1	M1 & M2	Underweight Children	Percentage of Children age 0-23 months that is underweight (-2 SD from the median weight-for-age, according to the World Health Organization (WHO)/National Center for Health Statistics (NCHS)													**29**	**5.45**	**29**	**5.45**
2	M3	Birth Spacing	Percent of children age 0-23 months that was born at least 24 months after the previous surviving child	**58**	**11.10**	**58**	**10.96**	**56**	**10.74**	**68**	**11.37**	**59**	**12.34**	**67**	**10.78**	**76**	**9.42**	**69.4**	**12.90**
3	M1	Delivery Assistance	Percent of children age 0-23 months whose birth were attended by skilled health personal upto MCHW	**17**	**6.31**	**23**	**7.19**	**31**	**7.19**	**33**	**8.00**	**33**	**8.00**	**30**	**7.79**	**40**	**8.32**	**42.1**	**8.39**
4	M1	Maternal Tetanus Toxoid (TT)	Percent of mothers with children age 0-23 months that received at least **TWO** tetanus toxoid injections before the birth of their youngest child.	**13**	**5.67**	**21**	**6.93**	**18**	**6.80**	**20**	**7.16**	**24**	**7.44**	**22**	**7.26**	**32**	**8.18**	**63.2**	**8.20**

5	M1	Exclusive Breastfeeding	Percent of children age 0-5 months that was exclusively breastfed during the last 24 hours	**62**	**8.26**	**95**	**5.15**	**83**	**8.94**	**90**	**6.73**	**75**	**11.58**	**93**	**6.03**	**80**	**10.41**	**100.0**	
6	M1	Complementory Feeding	Percent of children age 6-9 months that received breast milk and complementary foods during the last 24 hours	**73**	**15.82**	**64**	**15.69**	**82**	**10.84**	**81**	**13.91**	**81**	**9.70**	**87**	**9.54**	**88**	**9.18**	**95.7**	**4.81**
7	M2	Full Vaccination	Percent of children age 12-23 months that is fully vaccinated (against the five vaccine preventable diseases) before the first birthday	**10**	**5.05**	**11**	**5.38**	**29**	**7.68**	**34**	**8.04**	**40**	**8.32**	**52**	**8.49**	**50**	**8.50**	**66.9**	**8.00**
8	M2	Measles	Percent of children age 12-23 months that received a measles vaccine	**11**	**5.22**	**14**	**5.81**	**29**	**7.68**	**38**	**8.26**	**41**	**8.35**	**52**	**8.49**	**53**	**8.49**	**72.2**	**7.62**
9	M1 & M2	Bednets	Percentage of children age 0-23 months that slept under an insecticide-treated net (in malaria risk areas) the previous night													**1**	**1.04**	**1.5**	**1.46**
10	M3	HIV/AIDS	Percent of mothers with children age 0-23 months that cited at least **TWO** known ways of reducing the risk of HIV infection	**9**	**4.87**	**12**	**5.53**	**20**	**6.74**	**25**	**7.34**	**26**	**7.41**	**38**	**8.26**	**37**	**8.20**	**51.1**	**8.50**
11	M2	Hand Washing	Percent of mothers with children age 0-23 months that reported they wash their hands with soap or ash before food preparation and feeding children and after defection and attending to a child who has defecated	**5**	**3.80**	**4**	**3.23**	**18**	**6.54**	**26**	**7.41**	**33**	**8.00**	**50**	**8.50**	**47**	**8.49**	**63.2**	**8.20**

MANAGEMENT/TREATMENT OF ILLNESS																				
12	M1 & M2	Danger Signs	Percent of mothers of children aged 0-23 months that knew at least **TWO** signs of childhood illness that indicate the need for treatment	**84**	**4.42**	**88**	**3.91**	**94**	**2.94**	**98**	**1.63**	**100**	**0**	**98**	**1.46**	**99**	**1.04**	**99.6**	**0.74**
13	M1 & M2	Sick Child	Percent of sick children age 0-23 months that received increased continued feeding during an illness in the past two weeks	**62**	**12.84**	**62**	**13.90**	**82**	**11.17**	**87**	**9.28**	**87**	**9.73**	**89**	**9.18**	**90**	**7.84**	**94.5**	**6.00**
14	M1 & M2	Sick Child	Percent of sick children age 0-23 months that received increased fluids during an illness in the past two weeks	**24**	**11.23**	**34**	**13.55**	**71**	**13.24**	**63**	**13.09**	**83**	**10.95**	**76**	**12.56**	**91**	**7.22**	**92.7**	**6.86**

Note:
Indicators indicated (indicator # 13 and 14) are merged in generic RAPID CATCH but the Plan Nepal; CS Project in the same indicators has been collecting information separately.

Annex 6: KPC Baseline Survey (Sunsari and Para) and Health Facility Assessment (Sunsari)

KPC Baseline Survey Report using LQAS in Sunsari and Parsa Districts

Local Innovation for Better Outcomes for Neonates Projects (LIBON): PLAN Nepal Child Survival Project XXII

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Submitted by
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Dr. B. K. Subedi, Director, Family Health Division
Dr. Bhim Acharya, Chief, IMCI, Child Health Division

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Prof. Ishwar Bahadur Shrestha
Consultant
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Acronyms & Abbreviations

AHW	Auxiliary Health Worker
ANC	Antenatal Care
ANM	Assistant Nurse Midwife
ARI	Acute Respiratory Infection
ANC	Ante Natal Care
ANM	Assistant Nurse Midwife
BCC	Behavior Change Communication
BCG	Bacillus Calmelle-Guerin
BPKIHS	BP Koirala Institute of Health Sciences
BPP	Birth Preparedness Plan (Package)
CB-IMCI	Community Based Integrated Management of Childhood Illness
CB-MNC	Community Base and Maternal and Newborn Care
CBO	Community Based Organization
CHD	Child Health Division, DoHS
CHDK	Clean Home Delivery Kit
CPR	Contraceptive Prevalence Rate
CS	Child Survival
CSHGP	Child Survival and Health Grants Program
CSSA	Child Survival Sustainability Assessment
CSTS	Child Survival Technical Support
CWC	Child Welfare Center, Bara NGO Partner
DCM	Diarrhea Case Management
DDC	District Development Committee
DHO	District Health Office
DHS	Demographic Health Survey
DIP	Detailed Implementation Plan
DoHS	Department of Health Services
DPT	Diphtheria, Pertusis & Tetanus
EPI	Expanded Program on Immunization
EmOC	Emergency Obstetric Care
FAS	Field Area Supervisor
FCHV	Female Community Health Volunteer
FHD	Family Health Division, DoHS
FP	Family Planning
GoN	Government of Nepal
HA	Health Assistant
HF	Health Facility
HFA	Health Facility Assessment
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
HMIS	Health Management Information System
HP	Health Post
IMCHO	Integrated Mother and Child Health Organization, Bara NGO partner
IMCI	Integrated Management of Childhood Illness
IMR	Infant Mortality Rate
INGO	International Non-governmental Organization
IoM	Institute of Medicine
KPC	Knowledge Practice and Coverage

LBW	Low Birth Weight
LIBON	Local Innovations for Better Outcomes for Neonates
LQAS	Lot Quality Assurance Sampling
MCHW	Maternal and Child Health Worker
MG	Mothers' Group
MINI	Morang Innovative Neonatal Intervention
MMR	Maternal Mortality Ratio
MNC	Maternal and Neonatal (or Newborn Care)
MoHP	Ministry of Health and Population
MToT	Master Training of Trainers
NGO	Non-governmental Organization
NRs	Nepalese Rupees
ORC	Outreach Clinic
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PCM	Pneumonia Case Management
PHCC	Primary Health Care Center
PNC	Post Natal Care
PSBI	Possible Severe Bacterial Infection
PWG	Pregnant Women's Group
RCSD	Resource Center for Sustainable Development, Sunsari NGO Partner
RYC	Ramgun's Youth Club, Sunsari NGO Partner
SA	Supervision Area
SBA	Skilled Birth Assistance (Attendant)
SHP	Sub Health Post
Sr AHW	Senior Auxiliary Health Worker
TBA	Traditional Birth Attendant
ToT	Training of Trainers
TT	Tetanus Toxoid
UCI	Universal Child Immunization
USAID	United States Agency for International Development
VDC	Village Development Committee
VHW	Village Health Worker
WHO	World Health Organization
WRA	Women of Reproductive Age

Executive Summary

Plan is a non-profit, non-governmental international organization founded in 1935 and committed to achieving a world in which all children realize their full potential in societies that respect people's rights and dignity. Plan has been working in Nepal since 1977. Plan's work currently reaches more than one million people living in 146 communities in Bara, Bardiya, Banke, Dang, Makwanpur, Morang, and Rautahat programs in health, education, water and sanitation, and livelihoods. Plan's development model in Nepal relies on strong relationships with local NGOs and CBOs to implement community-based development activities. Plan has successfully implemented two previous child survival projects in Nepal supported by USAID.

A. Lot Quality Assurance Sampling (LQAS) Survey

In January 2008, Baseline Survey using LQAS was carried out in the Parsa and Sunsari districts to collect information on the current health status of newborns, pregnant women, and mothers. The objectives of the survey were: 1) to obtain information about knowledge of pregnant women and mothers of newborns and children under two years of age in the Parsa and Sunsari districts with regards to newborn health; 2) to identify existing health care practices prevalent at household level affecting newborn health; and 3) to assess coverage of health services affecting maternal and newborn health.

Questionnaire for this study was developed on the basis of guidelines as provided by Knowledge, Practice and Coverage (KPC) Survey 2000+ Field Guide. The questionnaire was adapted for this survey in consultation with partners and stakeholders to meet the specific objectives and context of the project. Two different questionnaires were developed corresponding to two population groups: mothers of children 0-5 months and mothers of children 0-23 months. Mothers of children 0-5 months were sampled to assess ante-natal visits, initiation of breast feeding, and knowledge and practices related to newborn health such as recognition of newborn danger signs and use of chlorhexidine on the umbilical stump. Mothers of children 0-23 months were assessed on feeding practices, immunization coverage and practices related to childhood illnesses including ARI, diarrhea and malaria.

The project organized two types of trainings: 1) master level TOT in Kathmandu and 2) district level training in each district.

The training comprised of LQAS methodology and its application. The majority of the participants had LQAS basic training and experience in developing KPC survey questionnaires through their involvement in previous child survival project, (CSXIII 1997-2001). The participants actively participated in developing the questionnaire, pre-testing the questionnaire, translating the questionnaire (from English to Nepali), sampling the respondents, data collection and data analysis.

Some of the major findings of the LQSS survey by modules are:

a. Module 1: Mothers with 0-5 months child

Antenatal Care

ANC Visit

- The percentages of mothers who had sought for antenatal care during the delivery of their youngest child were 82.2% in Parsa and 87.4% in Sunsari.
- Mothers who had 4 times ANC visits and checked by health workers upto ANM level were 24.7% in Parsa and 29.1% in Sunsari.

- Mothers who had 4 times ANCs visits and checked by health workers upto MCHW level were 30.0% for Parsa and 43.5% for Sunsari.
- Mothers who were counseled on at least one aspect during ANC visit were 69.2% in Parsa and 71.6% in Sunsari.

Tetanus Toxoid (TT2 +)

- The percentages of mothers who had two at least doses of Tetanus toxoid were 88.7% in Parsa and 83.5% in Sunsari.

Micronutrients

- The percentage of mothers who had consumed iron folate tablets/capsules were 77.3% in Parsa and 87.4% in Sunsari.
- Mothers suffering from night blindness during pregnancy and receiving low dose Vitamin A (25,000 iu) were 28.0% in Parsa and 10.3% in Sunsari.

Deworming

- The percentages of mothers receiving albendazole (400mg) tablets by three month of their last pregnancy were 37.7% in Parsa and 62.8 in Sunsari.

Knowledge of danger signs during pregnancy

- The percentages of mothers having knowledge of at least two danger signs during pregnancy that require treatment were 51.0% in Parsa and 46.7% in Sunsari.

Delivery Care

- The institutional delivery that is either at hospital, PHCC or HP or SHP was 30.0% in Parsa and 35.8% in Sunsari.
- The delivery by skilled birth attendants were 12.6% both in Parsa and Sunsari districts.
- The percentages of mothers having knowledge of at least two danger signs during delivery were 27.1% in Parsa and 17.2% in Sunsari.

Post natal Care

- The percentages of mothers who had PNC check up were 31.2% Parsa and 44.2% in Sunsari.
- The knowledge of at least two danger signs and symptoms after delivery were 27.5% for Parsa and 20.4% for Sunsari.

Newborn Care

Breast feeding and Colostrums feeding

- The percentages of mothers initiating breastfeeding immediately or within 1 hour after birth were 17.4% in Parsa and 33.0% in Sunsari.
- Majority of mothers fed colostrums to their neonates - 84.6% both in Parsa and in Sunsari.

Immediate care of newborn

- The percentages of mothers who bathed the newborns within 24 hours were 38.0% in Parsa and 48.8 % in Sunsari.
- The percentages of mothers who wrapped newborns with clothes were 43.7% in Parsa and 29.5 % in Sunsari.
- The percentages of mothers who dried off the newborns were 40.9% in Parsa and 40.0% in Sunsari.
- The percentages of mothers who allowed the newborn to sleep were 40.9% in Parsa and 40.0 % in Sunsari.
- The percentages of mothers who breastfed the newborns were 11.3% in Parsa and 16.5% in Sunsari.

- The percentages of mothers who massaged the newborns with oil were 47.4% in Parsa and 25.3 % in Sunsari.
- The percentages of mothers who gave Kangaroo care to the newborn were 9.3% in Parsa and 9.1% in Sunsari.
- The percentages of mothers who kept the newborn warm by keeping next to fire or heater were 3.2% in Parsa and 4.6 % in Sunsari.

Possible severe bacterial infection in neonates

- The neonates who had been diagnosed with severe PSBI within 48 hours of onset were 36.4% in Parsa and 69.2% in Sunsari.

Care of the child during PNC

- The percentages of mothers who were checked during PNC visit were 31,.6% in Parsa and 43.5% in Sunsari.

Use of Chlorhexidine

- Chlorhexidine is not applied in umbilical stumps in both the districts and their knowledge was also lacking among the mothers.

Knowledge of danger signs and symptoms in neonates requiring treatment

- The percentages of mothers on at least two danger signs and symptoms in neonates requiring treatment were 75.7% in Parsa and 62.8% in Sunsari.

b. Maternal and newborn care, Mothers with child 0-23 months

Antenatal Care

- The percentage of mothers receiving at least two doses Tetanus Toxoid were 95.1% in Parsa and 89.8% in Sunsari.

Delivery care

- The percentages of mothers who were attended by skilled birth attendants (doctor, nurse/midwife or other health workers) were 36.4% in Parsa and 47.4% in Sunsari.

Postnatal care

- The percentages of children who were checked by appropriate trained health worker during mother's postnatal visit within three days after birth were 27.9% in Parsa and 43.2% in Sunsari.

Breast/infant feeding

- The percentages of exclusively breastfed children within 24 hours were 80.7% in Parsa and 67.7% in Sunsari.
- The percentages of mothers following appropriate feeding practice to some extent were 32.5% in Parsa and 69.6% in Sunsari.

Nutrition

- The percentages of underweight children based on weight for age criteria were10.5% in Parsa and 13.0% in Sunsari.

Immunization

- The percentages of children aged 12-23 moths who were immunized against measles based on vaccination cards or mothers' recall were 77.6% in Parsa and 85.9% in Sunsari.
- The percentages of children aged 12-23 months who were immunized against measles based on vaccination cards only were 10.3% in Parsa and 21.7% in Sunsari.

- The access to immunization services measured by the percentages of children 12-23 months who had received DPT1 based on vaccination card or mothers' recall were 87.9% in Parsa and 94.6% in Sunsari.
- The percentages of children 12-23 months who had received DPT1 based on vaccination card only were 18.7% in Parsa and 31.5% in Sunsari.
- The health system performance for immunization services indicator as measured by the percentages of children aged 12-23 months who received DPT3 based on vaccination card or mothers' recall were 80.4% in Parsa and 88.0% in Sunsari.
- The percentages of children aged 12-23 months who received DPT3 based on vaccination card only were 15.9% in Parsa and 30.4% in Sunsari.
- The percentages of children who received Vitamin A supplement in the last 6 months based on card or mothers' recall were 70.7% in Parsa and 87.3% in Sunsari.

Management of diarrhea

- The percentages of children aged 0-23 months with diarrhea in the last two weeks who received oral rehydration solution and/or recommended home fluids were 29.4% in Parsa and 47.4% in Sunsari.

Management of ARI

- The percentages of children, who had an illness with cough that comes from the chest in the last two weeks preceding the survey, were 36.0% in Parsa and 46.8 % in Sunsari.

Malaria and its prevention

- The percentages of children suffering from fever were 21.5% in Parsa and 31.6% in Sunsari.
- The percentage of children aged 0-23 months with a febrile episode during the last two weeks who were treated with an effective anti-malarial drug within 24 hours after the fever began were 43.4% in Parsa and 36.7% in Sunsari.
- The use of insecticide treated mosquito net (ITN use) was not found in both districts.

Drinking water and handwashing behavior

- The percentages of households that have treated water effectively were 7.0% in Parsa and nearly 38.0% in Sunsari.
- The appropriate handwashing practice, that is the percentages of mothers of children aged 0-23 months who live in households with soap or detergent at the place for handwashing were 57.5% in Parsa and 72.3% in Sunsari.

B. Rural Health Facility Assessment (RHFA) Survey

The Rural Health Facility Assessment (RHFA) was conducted to assess the functioning of health system at its first level. The objectives of the assessment were 1) Determining the knowledge and practices of the health workers in the care of the sick child, growth monitoring and promotion and immunization, 2) Availability of drugs, supplies and equipment required for providing child care, ANC, delivery and neonatal services, training and supervision of health workers, and 3) Outputs of health facility inputs and process.

The survey instrument was based on rapid service provision tools developed for use in CSHGP project. Four modules to collect information were used in this assessment. The instruments were reviewed by the project staff, MoHP, IoM and Implementing partners. Module I is the clinical observation of the sick child, Module II deals with exit interview with the patient or care taker, Module III is the health facility checklist (Infrastructures, equipment, drugs and supplies), and Module IV is health worker interview and HMIS record review. TOT was conducted at the district level with

the participation from the center, districts, NGOs and project staff before administering the instrument in the field.

A total twenty five health facilities (1 PHCC, 2 HPs and 22 SHPs) were randomly selected from a total of 52 public health institutions operational in Sunsari districts. Six cases of sick child visiting health facility on the day of observation were observed. The most experienced health worker in caring for sick child was also interviewed. The available infrastructures and facilities were assessed using the checklist. The HMIS records and registers for sick child, ANC and delivery registers were reviewed.

Some of the key findings of RHFA survey are:

Inputs

Provision of services

- The average number of days the services available to treat the sick child health was 30.2 days.
- The average number of days immunization services available was 6.4 days.
- The average number of days growth monitoring services available 21.5 days.
- The average number of days ANC services available was 23.9 days.
- The average number of days delivery services available was 29 days.
- The percentage of health facilities that offer sick child care, immunization and growth monitoring services was 24.0%.
- The percentage of health facilities that offer ANC services at least four times a month was 100%.
- The percentage of health facilities that offer delivery services on all days of the weeks was 68%.

Staffing situation

- The percentage of health facilities where all clinical staff is present was 88%.
- The percentage of clinical staff present per health facility was 95.0%.

Infrastructures

- Only one health facility has at least one bed, 24 hours staff coverage and usable emergency transport.
- The percentage of health facilities having functioning emergency communications was 40.0%.
- The percentage of health facilities having electricity was 80.0%.
- The percentage of health facilities having water from protected source or potable ground water was 88.0%.
- The percentage of health facilities with all essential infrastructures was 32.0%.
- The average percentage of essential infrastructure present per health facility was 42.0%.

Equipment and supplies

- Nearly 16% of The percentage of health facilities having all essential supplies required for providing child health services was 16.0%
- None of the health facilities surveyed have functioning autoclaves while 48.0% have functioning refrigerator.
- Basic equipment such as an infant scale seems to be problematic in most of the health facilities.
- The most basic supplies such as a jar or a cup or a spoon essential for preparing ORS seems to be unavailable in more than 56.0% of the health facilities.
- The percentage of health facilities with all essential supplies required for providing child health services is 16%.
- The average percentage of supplies present at health facility was 66.0%.

- None of the health facilities surveyed have all basic supplies (infant scale, adult scale, timer/watch, ORS supplies) essential for providing neonatal and delivery services.
- The average percentage of neonatal and delivery supplies per health facility was 6%.
- Only 8% of the health facilities have all essential ANC equipment and supplies.
- The average percentage of essential ANC supplies present per health facilities was 33.0%.

Availability of Drugs

- None of the health facilities surveyed had all essential neonatal and delivery drugs.
- Antibiotics for newborn sepsis and pneumonia were not available at any of the health facility surveyed.
- Niveripine a drug used in case of HIV/AIDS infection were not available.
- Eye ointment for neonates was available in 9 health facilities.
- Oxytocin was available in only one health facility.
- The TT vaccination was found only in 18 of the 25 health facilities surveyed.
- None of the health facilities have ITNs.
- There was no stock out of drugs for the last six months.
- The percentage of essential ANC drugs available per health facility was 11.0%.

Immunization

- Vaccine supplied was pretty poor as approximately 2/3rd to 3/4th of the health facilities surveyed were stocked out of basic vaccines was 68.0%.
- The percentage of vaccines available per health facility was 74.9%.
- There was no stock out of vaccines (BCG, OPV, and DPT) for last six months.
- Measles vaccine was reported out of stock in one of the health facility.

Guidelines

- The availability of nationally mandated guidelines for care of children, ANC and delivery services were not available at any of the facilities.

Process

HMIS Register

- The percentage of health facilities which had sick child registers with all complete and up to date information on age, diagnosis and treatment was 36.0%
- The health facility having complete information on age last three months was 84.0%.
- Only 40-42% had complete information on diagnosis and treatment.
- The health facilities displaying and using monthly service was 20.0%.
- The health facilities reported that they have discussed monthly service data in the meetings was 64.0%.
- The health facilities that have not at all used the monthly service data was 28.0%.
- None of the health facility surveyed had all information system elements in place.
- The health facilities having complete TT information was 28.0%.
- Nearly a quarter of the health facilities had complete BP information maintained for the last three months as found in ANC registers.
- The health facilities have complete up to date delivery information for the last thirty days was 56.00%.
- The percentage of health facilities with complete and updated information on ANC and delivery register was 12%.
- The percentage of maternal and neonatal information elements complete per health facility was 50.0%.

Training and supervision of health workers

- One of the health workers had received training on IPT use, two on breastfeeding promotion and three on nutrition.
- None of the health workers had received training on other child health and maternal health aspects such as immunization, pneumonia, diarrhea and malaria case management, IMCI, newborn care, post partum care, ANC, infection control, emergencies referrals, ACT use and ITN use.
- The percentage of health facilities in which most experienced provider received child health training in last 12 months was 12.0%.
- The percentage of health facilities in which most experienced provider received training in maternal-neonatal care in last 12 months was 4.0%.
- The percentage of health facilities which received supervision in last 3 months was 16.0%.

Performance

Utilization of health services

- The average number of children seen for growth monitoring purpose in a year by a health facility was 1,662.
- The average number of children immunized in a health facility per year was 1,338.
- The average annual number of children treated at a health facility was 570.
- The average annual number of women attending a health facility for ANC purpose was 256.
- The average annual number of deliveries conducted in a health facility was 62.
- The average number of cases observed in a day was 5.3 for ARI, 1.2 for fever/ malaria and 1.1 for diarrhea.
- The percentage of assessment tasks done on average per health facility is 11.0%.
- The average number of ARI cases seen and treated at health facilities in the last three months was 59.6 cases per health facility.
- Of the cases that were treated at the health facilities, more than 90.0% were given first line antibiotics.
- The number of non-bloody diarrhea cases seen at the health facility in last three months was 689 of which 69.8% of the cases were given ORS but no antibiotics.
- The total number of cases seen in last three months for fever, ARI and diarrhea was 2,185 of which 84.0% were treated by following treatment protocol.

Exit interview

- More than one-fifth (21.3%) of the caretakers did not know the results of the diagnosis.
- Seventy percent of the cases had at least one drug prescribed for their clients.

Chapter I: Introduction

A. Background

Plan Nepal have implemented two successive USAID-Child Survival projects (rounds CSXIII 1997-2001 and CSXVII 2001-2006) in Rautahat and Bara districts of Nepal between the years 1997-2006. Plan Nepal has awarded a third USAID-Child Survival and Health Grant to implement a Community-Based Integrated Newborn Care Package in the Bara, Parsa and Sunsari districts of Nepal in coordination with the Ministry of Health & Population and partner organizations, through the Local Innovation for Better Outcomes for Neonates (LIBON) project for a four years period starting 30 September 2007.

The overall goal of the LIBON project is to assist the Ministry of Health and Population to reduce neonatal mortality rates and improve the health status of women of reproductive age in the three districts, Bara, Parsa and Sunsari. This goal will be achieved through three main sub-goals. The first sub-goal is to reduce neonatal mortality in the Sunsari and Parsa districts through the application of an integrated, community-based package of interventions and service delivery strategies that include the MINI project[32] and the chlorhexidine field trials[33]. The second sub-goal is to increase social inclusion and the adoption of an evidence-based decision making process for the planning and resource allocation of district-based child, maternal, and neonatal programs. The third sub-goal is to assist the MoHP and other constituencies in preparation and use of knowledge and policies and investment products that will accelerate the reduction of neonatal mortality in Nepal.

Program Districts

The three districts, Bara, Sunsari, and Parsa districts lies in the Terai region that extends along the Indian border. The total population is 1.9 million. Of this, 51,545 are children under 11 months, 47,937 are children 12-23 months, and 356,232 are women of reproductive age. Ethnic groups in the region include a sizeable Muslim population and lower castes. Most of the target population is poor, working mostly as tenant farmers. The literacy rate is very low. Most of the project area lacks basic infrastructure, such as electricity, sanitation and clean water supplies.

Nepal's under-five, infant, and neonatal mortality rates are 65, 51, and 34 per 1000 live births respectively (DHS, 2006). Compared to the 2001 DHS, neonatal mortality rates have only decreased from 39 to 34 deaths per 1000 live births in these five years and currently accounts for two thirds of the infant mortality rate. The three districts targeted by LIBON project have significant pockets of marginalized populations with less than average access and use of basic health services due to caste, ethnicity, and practice of a specific religion or the existence of bonded labor.

Project Strategies and Interventions

The project aims to achieve the goal and sub-goals through a number of key measurable objectives which include increasing tetanus toxoid coverage, increasing births attended by a skilled provider, increasing the number of mothers who breastfeed their newborns within one hour of birth, and increasing the number of neonates with bacterial infections that are accurately diagnosed by FCHV or health worker within 48 hours of onset. In addition, the MoHP will either (a) incorporate the experience of LIBON's integrated package of neonatal care within its Community based IMCI strategy and/or (b) regulate issue at least 2 nationwide technical/policy regulations based on the experiences and lessons learned from LIBON project.

As the site of the successful CSXVII project, the Bara district will serve as a training centre and learning site for the LIBON's participants in Sunsari and Parsa. The project will be implemented in Sunsari for all through four years period, leveraging its geographic proximity to Morang, where the

[32] Morang Innovative Neonatal Intervention (MINI) Project of Nepal Family Health Program
[33] Subject to approval from MoHP

MINI project was field tested. The LIBON interventions will be replicated in Parsa from year two. The accessibility of the project region from Kathmandu and other parts of the country will allow staff from MoHP, USAID, and other NGOs an opportunity to analyze, adapt, and replicate LIBON's innovative interventions in other areas.

To meet the goals, sub-goals, and objectives outlined above, LIBON will focus on the implementation of a community-based package of internationally recognized technical interventions to reduce neonatal mortality. The project will integrate innovative strategies for reducing neonatal infection, such as application of chlorhexidine to the umbilical stump, with interventions in the MOHP's service delivery strategy and those that have proven successful in previous Child Survival projects, such as promotion of immediate breastfeeding and administration of de-worming medication to pregnant women. The project will also build capacity at the central, district, and village level to make data driven decisions using information collected from Lot Quality Assurance Sampling methods Knowledge, Practice, and Coverage questionnaires (LQAS/KPC), Child Survival Sustainability Assessment (CSSA), and Rapid Health Facility Assessment methodologies. LIBON will aim to stimulate national level policy dialogue on nation-wide implementation of LIBON's innovative interventions.

Additional strategies of the project include supporting mothers'/pregnant women's groups to enable them to improve care for themselves and their children and strengthening the existing health system through improved linkages within the concerned stakeholders such as (FCHV, local health facilities, and primary health care units). LIBON will advance the inclusion of marginalized groups in the planning and monitoring of health activities at the district and VDC level by strengthening the capacities of DDC and VDC to enhance social inclusion in their membership. The project will adapt the methods and materials of both trials for their integration within a comprehensive package of neonatal care and will collaborate with the MoHP, IoM and the National Neonatal Steering Committee to raise the interest of national stakeholders on improved policies, investments and knowledge management related to neonatal mortality.

The project will benefit a total population of 723,442 (including the 51,545 children under 11 months; 47,937 children 12-23 months; 267,728 children 24-59 months; and 356,232 women of reproductive age).

B. Objectives

General Objective

The objective of the baseline LQAS (KPC) survey is to document current level of information about the levels of knowledge, practice, and coverage associated with mothers' health behaviors and practices and health services for the key child survival issues that will be addressed by the LIBON project. The information provided by the baseline KPC survey will be used to refine the proposed strategies and child survival (CS) technical interventions and to develop a detailed implementation plan of project activities.

Specific objectives

The LIBON CS Project aims to reduce neonatal mortality in Nepal. As such, the specific objectives of the baseline KPC survey are to provide information on:

- current knowledge level of pregnant women and mothers of newborns about child survival issues including major threats to infant, maternal and child health; safe pregnancy practices; and proper newborn care
- actual practices of mothers and community health care providers with regard to the child survival intervention areas mentioned above including prenatal visits; delivery by a skilled birth attendant; and immediate breastfeeding within one hour of birth

- coverage of primary health care services relating to newborn survival of newborn including tetanus toxoid immunization; administration of iron supplements to pregnant and postpartum mothers; and administration of post-partum vitamin A supplements.

C. Nepal's Health Care Services

The Government of Nepal (GoN) is committed to improving the health status of the people of Nepal through the provision of an equitable and quality health care delivery services. Towards this aim, and in line with the Poverty Reduction Strategy Paper and the Millennium Development Goals, the GoN has formulated its Health Sector Reform Strategy, An Agenda for Reform 2003 (The Nepal Health Sector Programme – Implementation Plan, NHSP-IP). The NHSP-IP includes safe motherhood and neonatal health as one of the key elements of the essential health care package.

Health care delivery is the responsibility of the Ministry of Health and Population (MoHP), although non-governmental organizations (NGO's) are increasingly supporting the government health services, both through the implementation of community-based programs and the management of health facilities.

The Divisions of Family Health and Child Health at the MoHP are responsible for organizing the national programs on Reproductive Health, Safe Motherhood, and Integrated Management of Childhood Illness (IMCI). Neonatal health is currently in the realm of both divisions. A multi-institutional Neonatal Sub-Committee (with its Technical Assistance Committee) has been created within the MoHP with shared leadership by both divisions. A National Neonatal Health Strategy was issued by the MoHP in 2004 which identifies evidence-based responses to neonatal health issues that will lead to reductions in neonatal mortality. This strategy was issued with support from international agencies but until now its implementation has been limited. To reinforce this National Strategy, the MoHP, with technical assistance from Save the Children, prepared in 2005 the draft of a National Neonatal Long Term Plan.

A potential but very relevant venue for mainstreaming neonatal health care within the MoHP is its incorporation in the Community-Based Integrated Management Childhood Illness (CB-IMCI) program which is being overseen by the Division of Child Health. CB-IMCI is being implemented across the country (with different degrees of implementation progress) with financial and technical assistance from international cooperation agencies, including the World Bank (NHSP - IP), WHO, UNICEF and USAID. Plan is currently supporting CB-IMCI in the three project districts as well as other Plan Nepal working districts.

The Department of Health Services is responsible for running the network of MoHP facilities throughout the country. There are five levels of health care delivery in the country, Sub-Health Post and Health Post, Primary Health Care Center, District Hospital, Zonal, sub-regional or regional hospital, and National Hospital. The Sub-Health Post (SHP), Health Post (HP), and Primary Health Care Center (PHCC) are the primary health care units (PHCUs), while the hospitals are the referral units.

The three LIBON districts have a total of three district hospitals and 233 primary health care units with 775 MoHP staff working. These are summarized in Table 1.1 below:

Table 1.1: Health Resources in Program Districts

District	# of VDCs	PHCs	SHPs	HPs	Doctor	Health Assistant	Staff Nurse	ANM	AHW	VHW	MCHW	Admin. Staff	Peon	Total
Sunsari	52	5	40	7	5	12	10	17	59	52	40	12	12	219
Parsa	83	3	75	5	3	8	6	11	88	83	75	8	8	290
Bara	98	3	84	11	3	14	6	17	109	98	84	14	14	359

MoHP guidance indicates that these facilities perform the following functions related to safe motherhood and newborn care:

At the *Sub-Health Post/Health Post* (usually staffed by an MCHW with 3 months formal training after 10 years of education or an auxiliary nurse midwife [ANM]- who passes 10 years of education and receives a School Leaving Certificate [from SLC Board] and then they have 18 months ANM training): provides antenatal and post-natal care, birth delivery (in selected posts), emergency obstetric first aid (antibiotic treatment, intravenous fluids), family planning, tetanus toxoid vaccination, newborn resuscitation (using an ambu bag), and parenteral administration of antibiotics to sick newborns.

At the *Primary Health Care Center* (usually staffed by an ANM, an auxiliary health worker and doctor, all with more than 10 years of schooling plus 18 months training for ANM and 3 years training for Health Assistant, and a doctor): provides the above services and Basic Obstetric Care (in selected facilities) and newborn resuscitation (using ambu bag).

At the *District Hospital* (usually staffed by medical doctors and registered nurses, plus support staff): the above functions and Comprehensive Obstetric Care and management of neonatal complications (hypoxia, hypothermia, sepsis).

In addition to services provided by health facilities, the GoN has supported the Female Community Health Worker (FCHV) program since 1988 in order to promote health through the interface of health facilities/staff and communities. The Female Community Health Volunteer (FCHV) plays an important role in the national strategy for primary health care, coordinating with and complementing the work at the RHCC. FCHVs are trained to treat basic illnesses and to give health education and other preventive activities in their communities. The FCHV is a volunteer and does not receive payment from the government, but is authorized small percentages of sales of commodities (such as bed nets and certain drugs). Many communities pay their FCHVs with in-kind contributions and some are employed on commercial farms. Supervision of FCHVs is generally the responsibility of the front-line HF staff, although logistical challenges make such supervision difficult. FCHVs report to HFs and receive their drug/supply kits from health facility, ideally on a monthly basis. Most supervision takes place at the health facility level, rather than in the community setting. NGOs are providing rural health services with the support from government in training and supervision of FCHVs. There are currently over 50,000 FCHVs working in Nepal. In the rural areas (terai region), there is an average of one village-based FCHV's per 706 persons.

Chapter II: Methods and Process

A. Partnership Building

LIBON's strategy aims to be participatory and conducive to decision making in order that collected information is accessible for use by various stakeholders. Therefore partnership building was taken as the key strategy from the very beginning of the project. This Baseline Survey was carried out in close partnership with government health agencies, academia, and local NGO partners. The Regional Health Directorate (RHD), Ministry of Health and Population (MoHP), Department of Health Services, District Health Offices (DHO) in the Program Districts, and local partners were consulted, and activities were planned and implemented with the participation of representatives of all the stakeholders.

All the partners, MoHP, DHO, District Development Committees (DDC), Village Development Committees (VDC), and Partner Working Group (PWG), were involved to promote discussion and decision making on methods to improve the health of the community. The roles of the partners were mainly in conducting training at the district level, data collection and supervision, data tabulation, analysis, and generating recommendations for inclusion in the activity plan. Plan Nepal played a catalytic and coordinating role in the implementation of planned activities in the district.

The partnership approach is simple to apply and low cost and therefore can be easily replicated at various project phases. In addition, the strategy is supportive of the decentralization process and the empowerment of local governments. Finally, it is complementary to the existing health information system of the MoHP, so that the information collected by LIBON will complement the epidemiological and health information regularly collected by MoHP facilities and eliminate redundancy and inefficiency. However, there were some constraints in the implementation of the program because of the conflict situation existing in the country, the political instability, and unpredictable *bands.* These were minimized by planning and working together with the community.

B. Lot Quality Assurance Sampling (LQAS)

B.1. Concept and Use

Lot Quality Assurance Sampling (LQAS) was developed in the 1920s for quality control of industrial production goods. The basic principle is that a line manager/supervisor takes a small random sample of a recent batch, or lot, of goods from a production unit such as an assembly line. If the number of defective goods in a sample exceeds a pre-determined number, then the lot is rejected; otherwise it is accepted. The pre-determined (allowable) number is called the "decision rule." This allowable number is based on a production standard and the sample size. Recently, the industrial monitoring experience was transferred to monitor the quality of health indicators and to improve supervision of the field area. Plan Nepal used the LQAS methodology for the first time in June 1999 in the Child Survival project CSXIII.

B.2. Purpose of LQAS

The LQAS sampling method was used in the LIBON project to collect baseline data on project-relevant health indicators, to determine whether the supervision areas were above or below average coverage on specific indicators, to determine the indicators that were well performing and those that were not within a given supervision area, and to determine how supervision areas within the total project area compared with another area.

B.3. Sample Size

Sample sizes were calculated with the following formula:

> $n = z^2(pq)/d^2$; where n = sample size; z = statistical certainty chosen; p = estimated prevalence/coverage rate/level to be investigated; q = 1-p; and d = precision desired.

The value of p was defined by the coverage rate that requires the largest sample size (p= 0.5). The value of d was dependent on the precision, or margin of error, desired (in this case d=0.1). The statistical certainty was chosen to be 95% (z=1.96). Given the above values, the necessary sample size turns out to:

> n = (1.96x1.96) (0.5x0.5)/(0.1x0.1) = (3.84)(0.25)/0.01 = 96

As the value of p is not known, we took a conservative approach and set p=0.5.
The estimate of confidence limits for the survey results was calculated using the following formula:

> 95% confidence limit = p ± z (square root of {pq/n}); where p = proportion in population found from survey; z = statistical certainty chosen (for 95% certainty, z = 1.96); q = 1-p; and n = sample size.

B.4. Sampling Frame

For the purpose of the KPC Baseline Survey, Parsa district was divided into 13 Supervisory Areas (SAs) (12 Ilakas of Parsa DHO and 1 district municipality). Likewise, Sunsari district was divided into 15 SAs (12 Ilakas of Sunsari DHO and 3 district municipalities).

A sample size of 19 households was selected per SA for this assessment. The reason for choosing 19 is that any sample that is less than 19 will have α and β errors greater than 10%, which is not desired. Similarly, increasing the sample size to greater than 19 creates more work and does not necessarily reduce the margin of error. In assessing coverage, we have aggregated all the samples taken from each Supervisory Area in order to obtain a large enough sample size as required to estimate the proportion in each population subgroup.

In the case of Parsa, the total sample size was calculated as 247 mothers (19 households x 13 Supervisory Areas = 247). Similarly, in Sunsari, the total sample size was 285 mothers (19 households x 15 Supervisory Areas = 285).

B.5. Threshold and Decision Rule

Initial thresholds/benchmarks for assessing the indicators were selected using the average proportion obtained by aggregating the data of all 13 SAs in Parsa and 15 SAs in Sunsari. The Decision Rule Table is included in Appendix 6.4.

B.6. KPC Questionnaire

Following the district-level training on LQAS, the participants from Plan Nepal, the District Health Office (DHO) and NGO/CBO partners were involved in the development of the questionnaire. The generic KPC 2000+ questionnaire was adapted with necessary changes and revisions following the pretest. This is basically the questionnaire used in NEPAL/CS projects with some modifications and revisions. All the participants were actively involved in developing the questionnaire, conducting the field pretest, and translating questions from English to Nepali. The questionnaires were shared with CARE Nepal, NFHP, local mission USAID, CHD, FHD, HMIS section of LMD, Central Regional Health Directorate, IoM, and Plan Nepal staff, and were modified four times. The field testing of the

questionnaire was carried out during the Master TOT of LQAS. The number of participants and facilitators involved in finalizing the questionnaire from each organization is detailed in Table 2.1.

Table 2.1: Participants Involved in the Finalization of Questionnaire by Organization

SN	Organization	Parsa District	Sunsari District
1	Institute of Medicine	1	2
2	District Health Office	13	8
3	Ilaka (sub-districts)	17	14
4	Government	1	1
5	NGOs/CBOs	9	5
6	Plan Nepal Staff	7	11
7	Facilitators from Plan Nepal	1	2
8	Facilitators from IoM	0	3
	Total	49	46

Two different questionnaire modules were developed corresponding to the two groups of target beneficiaries. Module 1 is for mothers of children 0-5 months old. This module captures information on mothers' knowledge of neonatal indicators. The Module 2 questionnaire is for mothers of children 0-23 months and captures Rapid Catch indicators and assesses immunization coverage and breastfeeding status.

B.7. Team Composition and Field Plan

The district teams were requested to select the supervisors and enumerators ensuring that they would include an IMCI focal point, a statistician, an EPI supervisor, an FP supervisor, and/or those in charge in Ilakas.

From the pool of representatives from DHO, NGO, IoM, and Plan, teams consisting of three persons (one from each group) were formed.

B.8. Training of Enumerators and Supervisors

The master TOT was a four-day training held at IoM, Kathmandu, in early January. The district-level LQAS training for Parsa was held from 5 to 9 February 2008. The LQAS data was collected from 10 to 18 February 2008, and tabulation was done from 19 to 23 February 2008. Sharing with all the district-level stakeholders did not take place due to security reasons in Parsa district. The district-level LQAS training for Sunsari was held from 11 to 15 January 2008. Data was collected using LQAS between 16 and 26 January 2008.

B.9. Data Collection

A standard procedure was applied for data collection. First, a sampling frame was constructed for each field area consisting of 2-9 VDCs, their 9 wards with population sizes. Secondly, dividing the total population size of a field area by the LQAS sample size of 19 created a sampling fraction. Third, a random number between 1 and the sampling fraction was selected. The ward having the corresponding person in the sampling frame's cumulative population column was selected as the first sample. Adding the sampling fraction to the selected sample identified the next ward. All remaining samples were selected by continuing the addition of the sampling fraction to the preceding sum.

Once a single house was selected randomly, they were asked whether the household had a child aged 0-23 months. If there was a child of 0-5 months, we interviewed both modules. If there was a child of 6-23 months, we went to the household with the nearest front door until we got a child aged 0-5 months.

Table 2.2: Schedule of Training, Data Collection, and Analysis

Particulars	Kathmandu	Parsa	Sunsari
LQAS – MTOT	4-8 January, 2008		
LQAS – DTOT		5-9 February, 2008	11-15 January, 2008
LQAS – Data Collection		10-18 February, 2008	16-26 January, 2008
LQAS – Data Hand Tabulation		19-23 February, 2008	27-30 January, 2008
LQAS – Sharing Workshop		5-9 February, 2008	31 January, 2008
LQAS – Computer Entry			

C. Rapid Health Facility Assessment

C.1. Purpose of Assessment

The purpose of this Rapid Health Facility Assessment tool is to assess the functioning of the health system at its first level and its articulation with the community within the program area of the Standard Child Survival Program in Nepal. This tool is meant to fill a specific niche – it is a basic tool for mainly community-based PVO programming. It is not comprehensive, but rather is meant to generate a minimum set of indicators of quality and access, especially insofar as these support community-based child health programming. Application of this tool may well uncover areas for improvement that may require further delineation and investigation in order to formulate an adequate strategy.

The objectives of the health facility assessment are:

- To determine the current knowledge and practices of health workers at outpatient clinics and of community health workers regarding the assessment and management of sick children.
- To use the information to prioritize and plan improvements in the quality of care at outpatient health facilities, including staffing, clinic organization, equipment requirements, drug and material supplies, case-management practices, and training and supervision of outpatient health workers and community health workers.
- To improve the capacity for assessment and supervision of local health workers and their supervisors. Specifically, these personnel should learn survey techniques, collection and analysis of survey data, and use of data to improve the quality of case management in first level health facilities and in the community.

Information collected by this assessment will help managers of primary health care programs and health workers plan and prioritize a number of elements that are essential for provision of quality and accessible child health services, including:

- Health worker training and supervision
- Availability of essential equipment and drugs
- Health facility management practices like record keeping, supervision, and training

C.2. Development of Instruments

The survey instrument was based on the Rapid Service Provision Assessment tool that CSTS+ has developed for use in CSHGP projects. The tool has four individual modules which collectively contain 150 questions/observations:

- Module 1: Clinical Observation of Six Consecutive Children
- Module 2: Exit Interview with Caretakers of Six Observed Sick Children
- Module 3: Health Facility Checklist (Infrastructure, Equipment, Supplies, and Drugs)
- Module 4: Health Worker Interview and Record Review

The instruments were sent to project staff for review and comment one week before the national review meeting. Sunsari project staff translated all four modules from English into Nepali to use as guidelines. The generic assessment tool also included Module 5, which was meant for Community Health Workers and was not used in the study, as the Government carries out FCHV Surveys every six months, which could be very well used for this project too.

C.3. Sampling Design

The assessment involved sampling at three levels: first-level health facilities (HFs), sick-child consultations/exit interviews, and interviews with health workers. Sampling was slightly different for each level.

Sampling of 25 Health Centers: There are 52 government HFs in Sunsari district program area. Random samples of 25 health centers were selected. District and private hospitals were excluded as program intervention only includes the health center and community levels. One checklist for facility inputs was applied in every facility.

Observed Cases/Exit Interviews: Six cases of sick child care were observed in each sampled health center. These were the cases attended either by the only provider of sick child care in the facility or by the provider with the most experience present on the day of the survey. This constitutes a cluster sample with a design effect of 1.3. The sample was designed to include 6 x 25 = 150 observations.

Health Worker (HW) Interviews: To complete the HW questionnaire, the surveyors interviewed the HW most experienced in caring for sick children, resulting in a purposively biased sample.

C.4. Training of Enumerators and Supervisors

The Project Coordinator and Consultant conducted the training at the district level for three days (February 14-17, 2008). Participants were from the center, district, NGO partners, and Project staff. The MoHP staff attended as supervisors because of their clinical experience and authority in the health facilities. The other interviewers were district-based program staff with the necessary skills and who would be instrumental in adjusting strategies based on the survey results. The list of participants is given in Appendix 6.3.

The training schedule is included in Appendix 6.2. The training was composed of an introductory section, followed by review of the modules to prepare participants to implement the forms. Half a day was devoted to classroom review and role playing. The training was concluded with a half-day module on logistics and the role of supervisors.

C.5. Information Collected

This assessment collected information on the case management of the most important causes of infant and child morbidity and mortality in the district and on health worker communication with caretakers at the time of the visit with a sick child. It also gathers information on the facility supports (essential medications, equipment, and materials) required for the management of these conditions. An enrollment card is developed to screen the cases for clinical observation. Information is collected on the management of the following clinical presentations:

- Fever (malaria, measles, ear infection)
- Acute lower respiratory tract infection (pneumonia)
- Diarrhea (simple watery diarrhea, persistent diarrhea, or dysentery)
- (Any infant or child presenting to a health facility with fever, cough or difficulty breathing, or diarrhea is included in this assessment)
- Whether the vaccination status of children is checked during the sick child visit and whether these children are vaccinated appropriately
- How well health workers counsel caretakers about preventive and curative care

- The quality of training and supervision received by health workers
- Availability of essential equipment (e.g., weighing scales, sterilizer, refrigerator)
- Availability of essential materials (e.g., measuring cups for oral rehydration salts, patient registers, stock cards, maternal and child health cards, growth monitoring charts)
- Availability of essential drugs (and vaccines) for the prevention and management of the most important causes of childhood morbidity and mortality
- Adequate number of staff and sufficient time for them to spend with each caretaker and child

C.6. Data Collection

A Rapid Health Facility Assessment (RHFA) was implemented from February 18 to 22, 2008 to measure access and quality of child health services in the 25 health centers in the program area, which are located in Sunsari district of Nepal. The RHFA was one of several baseline data tools applied for the Standard Program to provide a quantitative assessment of child health services as well as identify opportunities and constraints to the program that the district health systems present. Other baseline data tools included the population-based Lot Quality Assurance Sampling (LQAS) survey conducted 13 days after the RHFA. Results were used to inform the program strategies outlined in the Standard Program's Detailed Implementation Plan (DIP) for 2007-2011.

Data was collected by HFA teams of four people each. Each team consisted of a supervisor (who implemented the HF checklist and supervised other data collectors) and three other team members who specialized in the collection of the data from the other five forms.

D. Data Entry and Analysis

The collected information was thoroughly scrutinized for completeness and consistency in Kathmandu by the Survey Coordinators. The information was then entered in PC Computers.

The database software used was:

- For mothers questionnaire, data entry was done in EPI Info Version 3.3.2 statistical package. The data cleaning and analysis were done using SPSS Version 13.0.
- For Health Workers and FCHV questionnaire, both data entry and analysis were done using SPSS 13.0
- For Health Facility Assessment, data entry was done in Standard Excel Worksheet and analysis performed manually based on computer-generated results

Data collected during LQAS surveys in Sunsari were hand tabulated in the district during the three days immediately after collection with participation of MoHP staff and under the supervision of the Field Area supervisors and the Project Coordinator. Results were shared during a meeting with MoHP, CBO, and NGO staff on the following day. Unfortunately, in Parsa, social unrest made MoHP's participation in the data analysis impossible and the data were therefore analyzed by project staff who were unable to share them in a meeting forum until March 2008. After hand tabulation, the information was entered into EPI Info for computer analysis and crosschecked with the manual tabulations to ensure consistency. This report is based on the computer outputs.

Sampling errors, non-response error, incorrect information obtained from respondents, and recall bias were given attention to maintain quality of the data.

Chapter III: Core Indicators

A. LQAS Indicators

The following is a sample of key study indicators that were generated in the baseline LQAS survey (KPC) grouped by topic area. Table 3.1 presents a comprehensive set of indicators for Module 1 – survey of mothers of children 0-5 months. The Table 3.2 presents a comprehensive set of indicators for Module 2 – survey of mothers of children 0-23 months.

Table 3.1: LIBON Specific Indicators for 0-5 Months Module

A	**Antenatal Care Indicators**
1	Percent of mothers of children aged 0-5 months having a birth preparedness plan already coordinated with their closest health worker during their pregnancy
2	Percent of mothers of children aged 0-5 months who know at least two danger signs during pregnancy
3	Percent of mothers of children aged 0-5 months who were counseled on at least 1 counseling point during antenatal check-up
4	Percent of mothers of children aged 0-5 months who were counseled on at least 3 counseling points during antenatal check-up
5	Percent of mothers of children aged 0-5 months protected against tetanus by getting second dose of TT vaccine
6	Percent of mothers of children aged 0-5 months with 4 times ante-natal visit who were checked by ANM or AHW or Staff Nurse or HA or doctor
7	Percent of mothers of children aged 0-5 months with 6 times ante-natal visit who were checked by ANM or AHW or Staff Nurse or HA or doctor
8	Percent of mothers of children aged 0-5 months with 4 times ante-natal visit who were checked by MCHW or ANM or AHW or Staff Nurse or HA or doctor
9	Percent of mothers of children aged 0-5 months with 6 times ante-natal visit who were checked by MCHW or ANM or AHW or Staff Nurse or HA or doctor
10	Percent of mothers of children aged 0-5 months receiving iron foliate tablets/caps at least for 4 months during their pregnancy
11	Percent of mothers of children aged 0-5 months receiving iron foliate tablets/caps at least for 6 months during their pregnancy
12	Percent of mothers of children aged 0-5 months suffering from night blindness during their pregnancy and receiving low-dose vitamin A (25,000 IU)
13	Percent of mothers of children aged 0-5 months receiving a single dose of albendazole (400 mg) after completion of three month of last pregnancy
B	**Delivery Care Indicators**
14	Percent of mothers of children aged 0-5 months who know at least two danger signs during delivery
15	Percent of mothers of children aged 0-5 months whose birth was attended by a skilled provider (doctor or nurse or HA or AHW or ANM)
16	Percent of mothers of children aged 0-5 months whose birth was attended by a skilled provider (doctor or nurse or HA or AHW or ANM or MCHW)
17	Percent of birth attendants who washed their hands with soap before assisting in the procedure

C	**Postnatal Care Indicators**
18	Percent of mothers of children aged 0-5 months who know at least two danger signs after delivery
19	Percent of mothers of children aged 0-5 months who know at least two danger signs among newborns
20	Percent of mothers of children aged 0-5 months who know how to apply chlorhexidine on the umbilical stump
21	Percent of newborns who were breast-fed within one hour of birth
22	Percent of newborns immediately after birth, who were dried off, exposed to a heating source (including kangaroo care) and avoided bathing for 24 hours
23	Percent of mothers with children aged 0-5 months whose newborn children with signs of severe illness were seen by a qualified public or private provider
24	Percent of mothers with children aged 0-5 months (and their newborns) who received a first checkup by a skilled provider (doctor or nurse or HA or AHW or ANM) within the first two days of birth
25	Percent of mothers with children aged 0-5 months (and their newborns) who received a first checkup by a skilled provider (doctor or nurse or HA or AHW or ANM or MCHW) within the first two days of birth
26	Percent of mothers with children aged 0-5 months (and their newborns) who received a second post-natal checkup by a skilled provider (doctor or nurse or HA or AHW or ANM) within 3-7 days after birth
27	Percent of mothers with children aged 0-5 months (and their newborns) who received a second post-natal checkup by a skilled provider (doctor or nurse or HA or AHW or ANM or MCHW) within 3-7 days after birth
28	Percent of neonates with PSBI referred to a health worker for parenteral antibiotics within 48 hours of onset
29	Percent of neonates treated with antibiotics due to possible severe bacterial infections (PSBI) who completed the course of antibiotics
30	Percent of newborns whose umbilical stump was first applied with chlorhexidine 4% within 24 hours of birth
31	Percent of children of mothers aged 0-5 months who fed colostrums to child
32	Percent of mothers of children aged 0-5 months who received vitamin A (200,000 IU) within 45 days after delivery
33	Percent of neonates with PSBI diagnosed by a health worker or FCHV within 48 hours of onset
34	Percent of neonates with PSBI given a first dose of oral antibiotics within 48 hours of onset
35	Percent of neonates with PSBI given a first dose of oral antibiotics within 48 hours of onset for 3 days
36	Percent of neonates with PSBI given a first dose of oral antibiotics within 48 hours of onset for 3 to 5 days
37	Percent of children aged 0-5 months who received low-dose vitamin A (50,000 IU) within 48 hours of birth

Table 3.2: Core Indicators for 0-23 Months Module

SN	Indicator
1	*Tetanus Toxoid:* % of mothers with children aged 0-23 months who received at least 2 tetanus toxoid vaccinations before the birth of their youngest child
2	*Skilled Delivery Assistance:* % of children aged 0-23 months whose births were attended by skilled personnel (doctor, nurse, ANM, or other health staff with midwifery skills)
3	*Post-Natal Visit to Check on the Newborn:* % of children aged 0-23 months who received a post-natal visit from an appropriate trained health worker within three days after birth
4	*Exclusive Breastfeeding:* % of children aged 0-5 months who were exclusively breastfed during the last 24 hours
5	*Infant and Young Child Feeding:* % of children aged 6-23 months who were fed according to a minimum of appropriate feeding practices
6	*Vitamin A Supplementation:* % of children aged 6-23 months who received a dose of vitamin A in the last 6 months: card verified or mother's recall
7	*Measles Vaccination:* % of children aged 12-23 months who received measles vaccine according to the vaccination card or mother's recall by the time of the survey
7a	*Measles Vaccination:* % of children aged 12-23 months who received measles vaccine according to the vaccination card by the time of the survey (Card coverage)
8	*Access to Immunization Services:* % of children aged 12-23 months who received DTP1 according to the vaccination card or mother's recall by the time of the survey
8a	*Access to Immunization Services:* % of children aged 12-23 months who received DTP1 according to the vaccination card by the time of the survey (Card coverage)
9	*Health Systems Performance Regarding Immunization Services:* % of children aged 12-23 months who received DPT3 according to the vaccination card or mother's recall by the time of the survey
9a	*Health Systems Performance Regarding Immunization Services:* % of children aged 12-23 months who received DPT3 according to the vaccination card by the time of the survey (Card coverage)
10	*Treatment of Fever in Malaria Zones:* % of children aged 0-23 months with a febrile episode during the last two weeks who were treated with an effective anti-malarial drug within 24 hours after the fever began
11	*ORT Use:* % of children aged 0-23 months with diarrhea in the last two weeks who received oral rehydration solution and/or recommended home fluids
12	*Appropriate Care Seeking for Pneumonia:* % of children aged 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider
13	*Point of Use:* % of households of children aged 0-23 months that treat water effectively
14	*Appropriate Hand Washing Practices:* % of mothers of children aged 0-23 months who live in households with soap at the place for hand washing
15	*ITN Use:* % of children aged 0-23 months who slept under an insecticide-treated bed net the previous night
16	*Underweight:* % of children aged 0-23 months who are underweight (-SD for the median weight for age, according to WHO/NCHS reference population)

B. RHFA Indicators

The list of key indicators used in Rapid Health Facility Assessment Survey is given in Table 3.3.

Table 3.3: Core Indicators for Access Input, Process, and Performance used in RHFA

SN	Indicator
A	**Access**
1a	*Availability of child health services* - % health facilities that offer sick child, immunization and growth monitoring services
1b	*Availability of ANC services* - % health facilities that offer ANC services at least 4 times per month
1c	*Delivery Services* - % health facilities that offer delivery services on all days
2	*Staffing:* % health facilities in which all clinical staff were present
3	*Infrastructure:* % health facilities with all essential infrastructure (latrine, water, privacy)
4a	*Supplies for child health services* - % health facilities with all essential supplies
4b	*Supplies for neonatal and delivery services* - % health facilities with all basic neonatal & delivery supplies
4c	*Supplies for ANC services* - % of health facilities with all essential ANC supplies
5a	*Drug supplies for child health services:* % of health facilities with all essential child drugs
5b	*Drug supplies for neonate health services:* % of health facilities with all essential neonatal & delivery drugs
5c	*Drug supplies for ANC services:* % of health facilities with all essential drugs for ANC services
6	*Vaccine availability:* % of health facilities with all vaccines available
B	**Process**
7	*Information system:* % of health facilities with all information system elements in place
8a	*Training on child health:* % of health facilities in which most experienced provider received child health training in last 12 months
8b	*Training on maternal and neonatal health:* % of health facilities in which most experienced provider received training in maternal-neonatal care in last 12 months
9	*Supervision:* % of health facilities which received supervision in last 3 months
C	**Performance**
10a	Annualized number of clinical encounters for sick children
10b	Annualized number of ANC visits
10c	Annualized number of deliveries
10d	Annualized number of immunization visits
10e	Annualized number of children seen for growth monitoring

Chapter IV: Results of LQAS Survey Module 1 - Mothers with Children 0-5 Months

The results of the LQAS Baseline Survey conducted in Parsa and Sunsari districts are presented in this chapter. This chapter deals with the results of the Module 1 Questionnaire—that is, the information collected from mothers with children aged 0-5 months. The health care that a mother receives during pregnancy, at the time of delivery, and soon after delivery is important for the survival and well-being of both the mother and the child; therefore, such information is collected and analyzed in this study of newborn care.

A. Socio-demographic Characteristics

For this study, 247 mothers from Parsa district and 285 mothers from Sunsari district were interviewed. The socioeconomic characteristics of participating mothers are detailed below.

A.1. Mother's Age

Table 4.1 gives the current age of the mothers that were interviewed; they were mostly between 20 and 34 years of age. In Parsa there were only about 18.2% mothers that were less than 20 years of age, and in Sunsari still less (10.2%). Both in Parsa and Sunsari, more than 3.0% mothers were over 35 years of age. The mothers in the age group 20-34 years were 78.6% in Parsa and 86.3% in Sunsari districts. The average age was 23.1 years for Parsa and was slightly higher for Sunsari (24.0 years).

Table 4.7: Distribution of mothers with children 0-5 months by age

Mother's Age (years)	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
15-19	45	18.2	29	10.2
20-24	118	47.8	130	45.6
25-29	60	24.3	94	33.0
30-34	16	6.5	22	7.7
35-39	7	2.8	10	3.5
40-44	1	0.4	0	0
Total	247	100	285	100
Mean Age	*23.1*		*24.0*	

A.2. Mother's Education

Education plays an important role in one's behaviors, attitudes, and knowledge. Table 4.2 shows the distribution of mothers by educational attainment. More than half of the mothers participating in this study from these two districts were illiterate, 72.5% from Parsa and 52.3% from Sunsari. Mothers who were educated up to secondary level were about 13.4% in Parsa and almost 24.9% in Sunsari district. Those educated to primary level were 9.9% in Parsa and almost 11.9% in Sunsari. Few were educated to higher secondary level, that is 1.2% in Parsa and 5.3% in Sunsari. Still fewer with university level education participated in this study—1.2% in Parsa and 0.7% in Sunsari district.

Table 4.8: Distribution of mothers with children 0-5 months by educational status

	Parsa District		Sunsari District	
	No.	%	No.	%
Illiterate	179	72.5	149	52.3
Informal Education	5	2.0	14	4.9
Primary level	24	9.7	34	11.9
Secondary level	33	13.4	71	24.9
Higher Secondary level	3	1.2	15	5.3
University level	3	1.2	2	0.7
Total	247	100	285	100

A.3. Mother's Occupation

Most of the mothers in these districts were housewives, as shown in Table 4.3. In Parsa 73.7% of mothers, and in Sunsari 66.7% of mothers that participated in the study were housewives. Very few mothers, in Parsa 16.2% and in Sunsari 16.8%, were farmers. There were still fewer mothers who worked as laborers, 4.5% in Parsa and 10.2% in Sunsari. Few of the participating mothers were business women—in Parsa they were 2.8% and in Sunsari 4.2%.

Table 4.9: Distribution of mothers with children 0-5 months by occupation

	Parsa District		Sunsari District	
	No.	%	No.	%
Agriculture	40	16.2	48	16.8
Service	5	2.0	5	1.7
Business	7	2.8	12	4.2
Labor	11	4.5	29	10.2
Housewife	182	73.7	190	66.7
Others	2	0.8	1	0.4
Total	247	100	285	100

A.4. Sex Ratio of Children

The sex ratio of the children born to these mothers was fairly even, as show in Table 4.4. In Parsa, males accounted for 48.6% of all children, whereas females accounted for 51.4%. Similarly, in Sunsari male children were 56.8% and female children were 43.2%.

Table 4.10: Distribution of mothers with children 0-5 months of age by sex of their youngest children

	Parsa District		Sunsari District	
	No.	%	No.	%
Male	120	48.6	162	56.8
Female	127	51.4	123	43.2
Total	247	100	285	100

The distribution of mothers by number of children under the age of 6 months in the program districts is given in Table 4.5. Nearly 14.0% in Parsa and 16.1% mothers in Sunsari had children below the age of one month. The mean age of children in Parsa was 2.8 months, which is slightly higher than in Sunsari where the mean age was 2.4 months.

Table 4.11: Distribution of mothers with children 0-5 months by child's age

Child's Age (in months)	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
0	34	13.8	46	16.1
1	28	11.3	54	19.0
2	34	13.8	51	18.0
3	39	15.8	48	16.8
4	70	28.3	44	15.4
5	42	17.0	42	14.7
Total	247	100	285	100
Mean Age	*2.8*		*2.4*	

B. Antenatal Care

Maternal and neonatal care is associated with antenatal and postnatal care, including newborn care. While antenatal care deals with a better overall pregnancy care of mothers and newborns, it also helps prevent factors associated with newborn mortality such as low birth weight and tetanus during pregnancy. Mothers with children aged 0-5 months were asked various questions regarding mother and child health.

Newborn health care starts long before birth. It starts with caring for pregnant women. A healthy mother is most likely to have a healthy full-term baby who will survive. A mother who is not healthy during pregnancy may not be able to meet all her baby's needs. The goals of antenatal care are to keep the mother healthy, to help prevent problems like low birth weight and newborn infections, and to have a normal delivery. Current recommendations for antenatal care visits include a minimum of four visits starting no later than the fourth month of pregnancy. In the event of any complications, more frequent visits are advised.

Information on mothers who had ANC checkups during their last pregnancy and the person involved in the checkup were also collected, and the results are given in Table 4.6. The percentage of mothers who sought antenatal care during the delivery of their youngest child was good; it was 82.2% in Parsa and 87.4% in Sunsari.

Mothers who sought antenatal care and were checked by trained health providers were recorded. Trained health providers are defined as doctors, nurses/ANMs, HAs/AHWs and MCHWs. In Parsa, ANC was provided mostly by medical doctors (32.4%), followed by ANMs (26.7%), then by MCHWs (almost 11.8%), few by staff nurse (10.1%), and still fewer by AHWs (5.7%). Similarly in Sunsari, ANC was provided mostly by MCHWs (33.7%), followed by ANMs (27.0%), then by medical doctors (17.5%), few by staff nurses (9.8%) and still fewer by AHWs (4.6%).

Table 4.6: Distribution of mothers with children 0-5 months who had ANC checkup during delivery of youngest child and persons involved

ANC check up	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Yes	203	82.2	249	87.4
No	44	17.8	36	12.6
Person involved in check up				
Medical Doctor	80	32.4	50	17.5
Staff Nurse	25	10.1	28	9.8
HA/ Sr. AHW	3	1.2	4	1.4
AHW	14	5.7	13	4.6

ANM	66	26.7	77	27.0
MCHW	29	11.8	96	33.7
Trained TBA	0	0	1	0.4
Untrained TBA	1	0.4	1	0.4
FCHV	1	0.4	0	0
Others	8	3.2	2	0.7
Not stated	20	8.1	13	4.5
Total	**247**	**100**	**285**	**100**
Percent of mothers of children aged 0-5 months with 4 antenatal visits who were checked by ANM, AHW, Staff Nurse, HA, or doctor	*61*	*24.7*	*83*	*29.1*
Percent of mothers of children aged 0-5 months with 6 antenatal visits who were checked by ANM, AHW, Staff Nurse, HA, or doctor	*16*	*6.5*	*25*	*8.8*
Percent of mothers of children aged 0-5 months with 4 antenatal visits who were checked by MCHW, ANM, AHW, Staff Nurse, HA, or doctor	*74*	*30.0*	*124*	*43.5*
Percent of mothers of children aged 0-5 months with 6 antenatal visits who were checked by MCHW, ANM, AHW, Staff Nurse, HA, or doctor	*17*	*6.9*	*39*	*13.7*

Mothers who had 4 ANC visits and were checked by health workers of at least ANM level (doctors, HAs, nurses, AHWs or ANMs) were 24.7% in Parsa and 29.1% in Sunsari. Similarly mothers who had 6 ANC visits and checked by health workers of at least ANM level were 6.5% in Parsa and 8.8% in Sunsari.

MCHWs were also involved in ANC care. When this category of healthcare was also included, the above indicators became 30.0% for Parsa and 43.5% for Sunsari. Likewise, the percentage of mothers who had six ANC visits and were seen by health workers including MCHWs were 6.9% for Parsa and 13.7% for Sunsari.

B.1. Counseling during Antenatal Care

The content of antenatal care is important in assessing the quality of services. Pregnancy complications are an important source of maternal and child morbidity and mortality and thus teaching pregnant women about the danger signs associated with pregnancy and the appropriate action to be taken are essential components of antenatal care.

Pregnant mothers need healthcare information on several topics including nutrition, prevention of sexually transmitted infections (STIs), breastfeeding, planning for birth, including possible complications, and family planning after delivery.

The participating mothers were asked which aspects of antenatal care they were counseled on during ANC visits. 69.2% of mothers in Parsa and 71.6% in Sunsari were counseled on at least one aspect, as shown in Table 4.8. 17.0% of mothers in Parsa and 33.0% in Sunsari district were counseled on 3 aspects during ANC visits.

Table 4.7 Distribution of mothers with children 0-5 months based on number of aspects counseled during ANC visits

Counseling on at least:	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
One aspect during ANC visit	171	69.2	204	71.6
Three aspects during ANC visit	42	17.0	94	33.0

B.2. Tetanus Toxoid (TT)

Tetanus toxoid vaccination is given during pregnancy for the prevention of neonatal tetanus, a major cause of death among infants. For full protection, a pregnant woman should receive at least two doses during each pregnancy. If a woman has been vaccinated during a previous pregnancy or during maternal and neonatal tetanus vaccination campaigns, however, she may require only one dose for the current pregnancy. Five doses are considered to provide lifetime protection.

Mothers were asked whether they had received tetanus toxoid injections during their pregnancy. The percentage of mothers who had two doses of tetanus toxoid was found to be 88.7% in Parsa and 83.5% in Sunsari district, as shown in Table 4.8. The high percentage also indicates that the majority of pregnant women are receiving at least two antenatal visits.

Table 4.8: Distribution of mothers with children 0-5 months who received TT2+ injection during their last pregnancy

Received TT2 + injection	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Yes	219	88.7	238	83.5
No	28	11.3	42	14.7
Don't know	0	0	5	1.8
Total	247	100	285	100

B.3. Birth Preparedness Package

The Birth Preparedness Package (BPP) is a tool designed to encourage pregnant women and their families to prepare for both normal and complicated pregnancies. It helps ensure that the the baby will receive appropriate care promptly at the time of birth, especially if complications arise before or after birth. The birth package also minimizes chaos at the time of birth and increases the likelihood that the mother and her baby will receive appropriate and timely care. The BPP includes focused ANC, birth preparedness, complications, readiness focused PBC, danger signs during ANC delivery, and post partum care. The idea of BPP should be introduced at the mother's first antenatal visit and reviewed/updated with her during return visits.

Mothers were asked if they had used the Birth Preparedness Package. In Parsa district, 36.0% had BPP whereas more than half of the mothers (55.8%) in Sunsari had BPP, as shown in Table 4.9.

Out of the various issues to be considered in the BPP, the issue most considered by mothers was preparation for transportation (60.7% in Parsa and 70.4% in Sunsari). This was followed by 22.5% preparing for at least 3 blood donors in Parsa, and 17.6% in Sunsari. Another important issue to be considered was money, with 15.7% in Parsa and 8.2% in Sunsari thinking about this issue while making BPP.

Table 4.9: Distribution of mothers with children 0-5 months who had Birth Preparedness Plan during last pregnancy

Availability of Birth Preparedness Plan (BPP)	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Yes	89	36.0	159	55.8
No	158	64.0	126	44.2
Total	247	100	285	100
Issues considered in BPP				
Fund	14	15.7	13	8.2
Transportation	54	60.7	112	70.4
At least 3 blood donors	20	22.5	28	17.6
Others	1	1.1	6	3.8
Total	89	100	159	100
Consulted with skilled birth attendant for BPP during pregnancy				
Yes	39	43.8	98	61.6
No	50	56.2	61	38.4
Total	89	100	159	100
Types of health worker consulted for BPP				
Medical Doctor	7	17.9	11	11.2
Staff Nurse	2	5.1	10	10.2
HA/ Sr. AHW	1	2.6	1	1.0
AHW	2	5.1	8	8.2
ANM	8	20.5	26	26.6
MCHW	11	28.2	23	23.5
VHW	0	0	2	2.0
Trained TBA	0	0	1	1.0
Untrained TBA	0	0	1	1.0
FCHV	4	10.3	12	12.2
Others	4	10.3	3	3.1
Total	39	100	98	100

The mothers were asked if they had already coordinated with their closest skilled childbirth provider during their pregnancy. It was found that only about 43.8% in Parsa and 61.6% in Sunsari had coordinated with skilled childbirth providers.

The mothers who had coordinated with health workers were asked the types of health workers they had consulted with. In Parsa 17.9% had consulted doctors, 20.5% had consulted ANMs, 28.2% had consulted MCHWs, 10.3% FCHVs, 5.1% each staff nurse and AHWs, and 2.6% HA/Sr. AHWs. None of them had consulted TBAs. In Sunsari 11.2% had consulted a doctor, 26.6% had consulted ANMs, 23.5% had consulted MCHWs, 12.2% FCHVs, 10.2% staff nurse, 8.2% AHWs, and 1.0% each HA/Sr. AHWs and TBAs.

B.4. Micronutrients

Micronutrient supplementation (Vitamin A, iron/folate, iodine) can prevent low birth weight, prematurity, spinal cord defects, and cretinism. Iron is one of the most important minerals for human nutrition. Deficiency of iron leads to anemia which is common among women and children in Nepal. Iron supplementation during pregnancy has been a key health initiative in Nepal since 1980. According to government policy, all pregnant women are supplied with iron tablets containing 60mg

of elemental iron. These are provided to all pregnant women from the beginning of the second trimester of pregnancy and continuing up to 45 days postpartum (225 days in total).

The mothers were asked whether they had received iron tablets during pregnancy. The results are given in Table 4.10. The percentage of mothers who had consumed iron/folate tablets was 77.3% in Parsa and 87.4% in Sunsari.

Table 4.10: Distribution of mothers with children 0-5 months who had consumed iron/folate tablets during pregnancy

Consumption of iron tablets during pregnancy	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Yes	191	77.3	249	87.4
No	56	22.7	36	12.6
Total	247	100	285	100
Number of months iron tablets were consumed				
1	40	20.9	27	10.9
2	22	11.5	21	8.4
3	20	10.5	21	8.4
4	15	7.9	21	8.4
5	30	15.7	23	9.2
6	64	33.5	136	54.7
Total	191	100	249	100

The distribution of mothers according to the number of months iron/folate tablets were consumed was also recorded. It was found that in Parsa 33.5% mothers consumed for 6 months, followed by 20.9% of mothers consuming for one month. In Sunsari, 54.7% consumed for six months, 10.9% for one month, and 9.2% for five months.

Newborns have very small amounts of vitamin A. Breastfed infants normally get adequate vitamin A in breast milk to meet their requirements for this vitamin during the first months of life. The amount of vitamin A in breast milk depends on the mother's vitamin A level. Vitamin A helps babies grow and develop well and protects mothers and babies from infections. When they do get infected, vitamin A also helps them recover quickly. Vitamin A deficiency still remains a public health problem. Low-dose vitamin A (25,000 IU), provided for four weeks, is being piloted by the Government of Nepal in Parsa, Sunsari, and Chitwan districts to treat night blindness among pregnant women by.

The mothers were asked if they had suffered from night blindness during their last pregnancy and whether they had received low-dose vitamin A. Night blindness is a disease due to inadequate dietary intake of vitamin A. The results in Table 4.11 indicate that 10.1% of mothers in Parsa and 10.2% in Sunsari suffered from night blindness. Mothers suffering from night blindness and receiving low-dose vitamin A during pregnancy were 28.0% in Parsa and 10.3% in Sunsari.

Table 4.11: Distribution of mothers with children 0-5 months who suffered from night blindness during their last pregnancy

Suffered from night blindness during pregnancy	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Yes	25	10.1	29	10.2
No	222	89.9	256	89.8
Total	247	100	285	100

Received low-dose vitamin A during pregnancy				
Yes	7	28.0	3	10.3
No	18	72.0	26	89.7
Total	25	100	29	100

B.5. Deworming

Worm infestation is an important health problem in this part of the world which needs to be addressed. The prevalence of worm infestation in Nepal is very high. Worm infestation in children leads to decreased resistance to infection, induces malnutrition, and also leads to anemia impairing cognitive function in children. To address this problem, deworming of all pregnant women with a single dose of albendazole (400 mg) after the first trimester of pregnancy has been introduced in all health facilities by the Government of Nepal.

Mothers who have received a single deworming tablet were also assessed in this study. It was found that 37.7% mothers in Parsa and 62.8% mothers in Sunsari had received albendazole tablets by month three of their last pregnancy, as shown in Table 4.12.

Table 4.12: Distribution of mothers with children 0-5 months who received a single dose of albendazole (400mg) after third month of their last pregnancy

	Parsa District		**Sunsari District**	
	No.	%	No.	%
Yes	93	37.7	179	62.8
No	154	62.3	106	37.2
Total	247	100	285	100

B.6. Mother's Knowledge of Danger Signs and Symptoms during Pregnancy

If a woman develops a complication during pregnancy, both her life and the baby's life may be in danger. Danger signs indicate serious or life-threatening problems requiring urgent medical care. Mothers' knowledge on danger signs during pregnancy were inquired upon and the results are presented in Table 4.13. Frequent vomiting was the most common danger sign stated by the mothers in Parsa (34.8%) followed by severe abdominal pain (28.3%). In Sunsari, fever was quoted as the most important danger sign during pregnancy (28.4%) followed by abdominal pain (27.5%) and frequent vomiting (24.9%) Mothers who had knowledge of at least two danger signs during pregnancy were assessed. It was found that in Parsa 56.0% and in Sunsari 52.0% of mothers had knowledge of at least two danger signs during pregnancy requiring treatment.

Table 4.13: Distribution of mothers with children 0-5 months by knowledge on danger signs and symptoms during pregnancy indicating need to seek health care

Danger signs & symptoms during pregnancy indicating the need to seek health care	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Fever	35	14.2	81	28.4
Frequent vomiting	86	34.8	71	24.9
Severe abdominal pain	70	28.3	78	27.5
Severe headache	40	16.2	36	12.6
Anemia	11	4.5	12	4.2
Shortness of breath	4	1.6	5	1.8
PV bleeding	1	0.4	1	0.3

Swelling of the body/hand/face	0	0	1	0.3
Total	247	100	285	100
Knowledge of at least two danger signs during pregnancy	*67*	*56.0*		*52.0*

C. Delivery Care

Proper medical attention and hygiene during delivery can reduce the risk of complications and infections that cause death or serious illness of a mother, baby, or both. It is important to increase the proportion of babies delivered in a safe and clean environment and under the supervision of health professionals. Nepal is promoting safe motherhood through various activities, especially delivery by skilled birth attendants (SBA).

C.1. Place of Delivery

As indicated in Table 4.14, most of the mothers reported that they had delivered their babies at home, 67.6% in Parsa and 61.0% in Sunsari. A considerable percentage of deliveries had taken place in hospitals as compared to other health facilities. In Parsa district, almost 24.0% and in Sunsari more than 33.0% had delivered their babies in the hospital. Only 3.7% in Parsa and 2.1% in Sunsari reported deliveries in PHCC. Similarly deliveries in HP/SHP were reported by only 2.0% in Parsa and 0.4% in Sunsari. Institutional delivery—that is, either at hospital, PHCC, HP, or SHP—account for 30.0% of all births in Parsa and 35.8% of all birts in Sunsari district.

Table 4.14: Distribution of mothers with children 0-5 months by place of delivery of their youngest child

	Parsa District		**Sunsari District**	
	No.	%	No.	%
Home	167	67.6	174	61.0
Hospital	59	23.9	95	33.3
PHCC	9	3.7	6	2.1
HP/SHP	5	2.0	1	0.4
NGO clinic	0	0	5	1.8
Private clinic	7	2.8	4	1.4
Total	247	100	285	100
Institutional Delivery (Hospital, PHCC, HP, or SHP)	73	30.0	102	35.8

C.2. Skilled Birth Assistance

Skilled Birth Assistance (SBA) refers to the process by which a pregnant woman is provided with adequate care during labor, birth, and the post partum and immediate newborn periods. A skilled attendant is a professional caregiver who possess the knowledge and defined set of cognitive and practical skills that enable the individuals to provide safe and effective healthcare during childbirth to women and their newborns in the home, health center, and hospital settings.[34] Skilled attendants include health personnel with midwifery and life-saving skills. In Nepal, MCHWs, ANMs, nurses, and doctors are considered skilled birth attendants. Increasing skilled attendants at delivery is the main intervention for reducing maternal mortality.

Mothers were asked about the attendants who helped them at the time of delivery. They were attended either by health workers such as doctors, staff nurses, health assistant/SAHWs and ANMs, or

[34] WHO, 2000

traditional attendants like TBAs, family members, friends, and relatives. Table 4.15 shows that most deliveries were attended by non-health workers. The majority of deliveries were attended by TBAs–trained and untrained.

Table 4.15: Distribution of mothers with children 0-5 months by type of person assisting delivery for deliveries conducted outside public health institutions

	Parsa District (n = 174)		**Sunsari District (n = 183)**	
	No.	%	No.	%
Doctor	5	2.9	7	3.8
Staff nurse	3	1.7	5	2.7
Health assistant/SAHW	1	0.6	1	0.6
AHW	6	3.5	8	4.4
ANM	7	4.0	7	3.8
MCHW	7	4.0	4	2.2
Trained TBA	37	21.3	16	8.7
Untrained TBA	28	16.1	37	20.2
FCHV	9	5.2	8	4.4
VHW	3	1.7	3	1.6
Family member	47	27.0	56	30.6
Other	19	10.9	30	16.4
None	2	1.1	1	0.6
Total (Non-institutional delivery)	174	100	183	100
Delivery by skilled birth assistance (Doctor, nurse, ANM or MCHW)	22	12.6	23	12.6

The delivery by SBA is 12.6% in both in Parsa and Sunsari districts for births outside of health institutions.

C.3. Clean Delivery Practice

The majority of normal births and newborn care take place at home without trained providers and in primary care centers. Regardless of the place of birth, all personnel who attend births and care for newborns should practice clean delivery and should have the knowledge and skills to provide essential care to a newborn. Mothers were asked if their attendants washed their hands before assisting delivery; the results are presented in Table 4.16.

In Parsa 65.5% and in Sunsari 61.7% of mothers reported that the delivery attendants used soap for washing hands before assisting delivery. In Parsa 22.4% and in Sunsari 21.1% said that they did not use soap to wash hands. The rest of them did not know whether they had used soap to wash their hands.

Table 4.16: Distribution of mothers with children 0-5 months who reported that the birth attendants used soap to wash hands before assisting delivery

Washing of hands with soap by birth attendants	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Yes	114	65.5	111	61.7
No	39	22.4	38	21.1
Don't know	21	12.1	31	17.2
Total	174	100	180	100

C.4. Mother's Knowledge of Danger Signs and Symptoms during Delivery

The mothers were assessed on their knowledge of danger signs and symptoms during delivery. According to most of these mothers, malpresentation of the fetus and prolonged labor are the most important danger signs, as indicated in Table 4.17. The percentage of mothers having knowledge of at least two danger signs during delivery is 27.1% in Parsa and 17.2% in Sunsari.

Table 4.17: Distribution of mothers with children 0-5 months by knowledge of danger signs and symptoms during delivery indicating need to seek health care

Knowledge of mothers on danger signs during delivery	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Prolonged labor (>12hrs/2nd stage)	72	29.2	129	45.3
Malpresentation (hand/leg prolapse)	108	43.7	107	37.5
Cord prolapsed	55	22.3	38	13.3
Bleeding during delivery	6	2.4	9	3.1
Retained placenta (> 2 hrs)	5	2.0	0	0
Fits/ convulsion	1	0.4	1	0.4
Others	0	0	1	0.4
Knowledge on at least 2 danger signs during delivery	*67*	*27.1*	*49*	*17.2*

D. Postnatal Care

Postnatal care (PNC) includes at least three postnatal visits, detection of complications of mothers and newborns, identification and treatment of sepsis, detection of hypertension, detection of mastitis, exclusive breastfeeding, and vitamin A supplementation.

D.1. First PNC Checkup of Mothers

Mothers were asked if they had PNC checkups after delivery. More than half of them (68.8% from Parsa and 55.8% from Sunsari) said that they did not have any PNC checkups after delivery. The time of such checkups was mostly within 24 hours after delivery; in Parsa 94.8% and in Sunsari 90.5% said that they had such checkups within 24 hours. 3.9% in Parsa district and 5.6% in Sunsari district had PNC checkups within 24 to 48 hours of delivery. More than half of these mothers, 53.2% in Parsa and 52.4% in Sunsari, had such checkups done by a doctor. The findings are presented in Table 4.18 below.

Table 4.18: Distribution of mothers with children 0-5 months who had first PNC checkup

PNC checkup of mothers after delivery	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Yes	77	31.2	126	44.2
No	170	68.8	159	55.8
Total	247	100	285	100
Time of first PNC checkup				
Within 24 hrs	73	94.8	114	90.5
Between 24 to 48 hrs	3	3.9	7	5.6
Between 48 to 72 hrs	0	0	1	0.8
Between 72 hrs to 7 days	0	0	1	0.8
After 7 days	1	1.3	3	2.3

Types of health worker involved	77	100	126	100
Doctor[35]	41	53.2	66	52.4
Staff nurse	6	7.8	14	11.1
AHW	7	9.1	14	11.1
ANM	12	15.6	11	8.7
MCHW	7	9.1	5	4.0
VHW	1	1.3	0	0
Untrained TBA	0	0	1	0.8
FCHV	0	0	3	2.4
Others	3	3.9	12	9.5
Total	77	100	126	100

D.2. Second PNC Checkup of Mothers

Mothers who had undergone second PNC checkups were also asked about the time of the checkup and the persons involved. Slightly less than half of them in both districts never had a second PNC checkup (44.2% in Parsa and 49.2% in Sunsari). Mothers who underwent second PNC checkups were mostly seen by doctors, in Parsa 76.7% and in Sunsari 68.8%. Detailed findings are presented in Table 4.19.

Table 4.19: Distribution of mothers with children 0-5 months who had second PNC checkup

Time of second PNC checkup	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Within 24 hrs	5	6.5	21	16.7
Between 24 to 48 hrs	21	27.3	22	17.5
Between 48 to 72 hrs	8	10.3	1	0.8
Between 72 hrs to 7 days	4	5.2	5	3.9
After 7 days	5	6.5	15	11.9
Never	34	44.2	62	49.2
Total	77	100	126	100
Types of health worker involved				
Doctor	33	76.7	44	68.8
Staff nurse	2	4.7	5	7.8
HA/ Sr. AHW	1	2.3	0	0
AHW	0	0	5	7.8
ANM	3	7.0	3	4.7
MCHW	1	2.3	3	4.7
Untrained TBA	0	0	2	3.1
FCHV	1	2.3	0	0
Others	2	4.7	2	3.1
Total	43	100	64	100

D.3. Knowledge of Mothers on Danger Signs after Delivery

After birth, certain postpartum complications can threaten the life of the mother. Most maternal mortality occurs during the postpartum period. If the mother dies, the baby's risk of dying increases significantly. To prevent this, mothers should recognize postpartum danger signs and seek care immediately if a danger sign develops.

[35] A cited doctor may not necessarily be a qualified medical doctor but are the persons perceived by mothers as doctors. In rural settings, anyone with a white apron or providing healthcare may be referred to as a doctor.

The mothers were assessed on their knowledge of danger signs and symptoms after delivery. According to most of them, fever and excessive bleeding were the two danger signs after delivery. As shown in Table 4.20, in Parsa 41.7% and in Sunsari more than 45.3% said that fever is the danger sign after delivery and 30.8% in Parsa and 34.4% in Sunsari identified excessive bleeding as the danger sign after delivery. About 22.0% in Parsa and slightly more than 15.0% in Sunsari said that foul smelling vaginal discharge was a danger sign. Fits and convulsion are danger signs to almost 5.0% in Parsa and 3.5% in Sunsari. 27.5% of mothers interviewed in Parsa and 20.4% of those interviewed in Sunsari knew of at least two danger signs and symptoms after delivery.

Table 4.20: Distribution of mothers with children 0-5 months by knowledge on danger signs and symptoms after delivery

Danger signs after delivery	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Fever	103	41.7	129	45.3
Excessive bleeding	76	30.8	98	34.4
Foul smelling vaginal discharge	54	21.9	43	15.1
Fits/convulsion	12	4.9	10	3.5
Severe headache	2	4.9	4	1.4
Pale /swelling of legs and face	0	0.8	0	0
Uterus prolapse	0	0	1	0.3
Total	247	100	285	100
Knowledge of at least two danger signs after delivery	*68*	*27.5*	*58*	*20.4*

D.4. Vitamin A

As part of postpartum care, mothers were provided with vitamin A supplementation through public health institutions and FCHVs. Mothers were given vitamin A (200,000 IU) within 45 days after birth. In this survey, mothers were given high and low doses of vitamin A within 45 days of delivery. Mothers were asked if they had received high dose of Vitamin A. The results are presented in Table 4.21. In Parsa nearly half of them (47.8%) had received a high dose of vitamin A, whereas in Sunsari more than half of them (60.3%) had received a high dose of vitamin A.

In addition, other postpartum mothers were provided with low-dose vitamin A (50,000 IU) immediately after birth (within 48 hours). According to survey results, 2.4% in Parsa and 3.9% in Sunsari had received low-dose vitamin A within 48 hours of delivery.

Table 4.21: Distribution of mothers with children 0-5 months who had received high dose/low dose of vitamin A

Received high-dose vitamin A capsule within 45 days of delivery	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Yes	118	47.8	172	60.3
No	129	52.2	113	39.7
Total	247	100	285	100
Received low-dose vitamin A (50,000 IU) within 48 hours after birth				
Yes	6	2.4	11	3.9
No	241	97.6	274	96.1
Total	247	100	285	100

E. Newborn Care

Despite important gains during the past 15 years, maternal mortality and newborn morbidity rates remain high. The contributing factors are primarily the lack of skilled care during pregnancy, birth, and the postpartum period, as well as poor referral systems. The major causes of neonatal deaths are infections (sepsis, pneumonia, tetanus, and diarrhea), asphyxia, and prematurity/low birth weight (birth weight less than 2,500 g).

Prenatal and neonatal outcomes are inseparable from women's health status, and the quality of care available during pregnancy and childbirth also affect fetal and newborn health. The mother and baby should be treated as one entity; therefore, during postnatal visits the newborn's health is also checked.

Nepal's neonatal mortality is the third highest in the world. Most maternal and newborn deaths are preventable conditions. A large proportion of maternal and neonatal deaths occur during the first 24 hours following delivery. In this section, newborn care techniques such as breastfeeding, colostrum feeding, immediate care of the newborn, treatment of sepsis, vitamin A supplementation, neonatal health checkup during postnatal visits, and use of chlorhexidine are discussed.

E. 1. Breastfeeding and Colostrum Feeding

Early initiation of breastfeeding is of advantage to both mother and child. Early breastfeeding is defined as giving breast milk within minutes of the baby's birth. Most babies are ready to feed within 15 to 55 minutes after birth.

The mothers in this study were asked if they ever breastfed their newborn. It was found that the majority of them (99.2% in Parsa and 98.3% in Sunsari) had breastfed their newborn. These mothers were also asked the time of initiating breastfeeding. It was found that in Parsa nearly half of them (47.8%) had initiated breastfeeding after 8 hours and 34.0% of them initiated breastfeeding within 1-8 hours. Only about 17.4% in Parsa initiated breastfeeding immediately or within 1 hour after birth. Less than 1.0% had never breastfed their newborn. Similarly, in Sunsari nearly 38.9% mothers breastfed within 1-8 hours after birth. As compared to Parsa, in Sunsari 33.0% mothers immediately breastfed within 1 hour after birth and 26.3% breastfed after 8 hours. In Sunsari, almost 1.8% never breastfed their newborn.

The first time a mother feeds her baby is an important time because colostrum is the first milk secreted from the breast and has many benefits for the newborn. It is very high in antibodies and vitamin A and should therefore not be discarded. If the first breastfeeding is successful, it helps later breastfeeding to be successful. Thus, mothers were asked if they fed their newborn with colostrum. It was found that 84.6% each in Parsa and in Sunsari fed colostrum to their neonates. (Table 4.22)

Table 4.22: Distribution of mothers with children 0-5 months who had ever breastfed or fed colostrum to child

Ever breastfed	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Yes	245	99.2	280	98.3
No	2	0.8	5	1.7
Total	247	100	285	100
Time of initiating breastfeeding for the first time after birth				
Immediately/within first hour	43	17.4	94	33.0
After one to eight hours	84	34.0	111	38.9
After eight hours	118	47.8	75	26.3

Never breastfed	2	0.8	5	1.8
Total	247	100	285	100
Colostrum Feeding				
Yes	209	84.6	241	84.6
Thrown away	36	14.6	41	14.4
Don't know	2	0.8	3	1.0
Total	247	100	285	100

E.2. Immediate Care of Newborn

The immediate care of the newborn includes immediate and exclusive breastfeeding; resuscitation, stabilization and management of newborns with asphyxia, hypothermia, and sepsis, and low birth weight; and kangaroo mother care[36]. The mothers were asked the time newborns were given their first bath. In Parsa it was found that 56.7% of mothers gave baths after 24 hours and 38.0% of them gave a first bath within 24 hours. In Sunsari nearly half of them gave first baths within 24 hours and after 24 hours from birth. (Table 4.23)

Table 4.23: Distribution of mothers with children 0-5 months by types of immediate newborn care given to neonates

	Parsa District		**Sunsari District**	
	No.	%	No.	%
Within 24 hrs	94	38.0	139	48.8
After 24 hrs	140	56.7	141	49.5
Not bathed to date	13	5.3	5	1.7
Total	247	100	285	100
Placing of newborn immediately after birth (multiple response)				
Mother	82	33.2	50	17.6
Cot	5	2.0	8	2.8
Floor	66	26.7	80	28.1
Bath tub	3	1.2	2	0.7
Others	15	6.1	39	13.7
Do not know	3	1.2	0	0
Types of care to the newborn				
Breastfed	28	11.3	47	16.5
Bathed	74	30.0	98	34.4
Let sleep	51	20.7	45	15.8
Dried off	101	40.9	114	40.0
Wrapped with cloth	108	43.7	84	29.5
Kangaroo care	23	9.3	26	9.1
Warmed up by keeping next to fire and heater	8	3.2	13	4.6
Oil massage	117	47.4	72	25.3
Others	15	6.1	7	2.5
Do not know	3	1.2	9	3.2

[36] An approach used in the care of both in the preterm and LBW babies based on continuous skin-to-skin contact with the mother designed to encourage breastfeeding and provide continuous warmth.

The mothers were asked where the newborn was placed immediately after birth. The newborn was either given to the mother or placed on the floor according to the mothers. In Parsa 33.2% and in Sunsari 17.6% said that it was given to the mother. Similarly, 26.7% in Parsa and 28.1% in Sunsari said that the newborn was kept on the floor. Very few, 2.0% in Parsa and 2.8% in Sunsari, said that newborns were kept in the cot.

The mothers were also asked the type of care they gave to their newborn. In Parsa 47.4% gave oil massage to the baby, 43.7% wrapped newborns with clothes, 40.9% said that they dried off the newborns, 30.0% said that they bathed the newborns, 20.7 % said that they let the newborn sleep, 11.3% said that they breastfed the newborn, 9.3% said that they gave Kangaroo care to the newborn, and 3.2% said that they warmed up the baby by keeping it next to the fire or heater. Likewise in Sunsari, 40.0% said that the newborn was dried off, 34.4% said that they bathed the newborn, 29.5% said that they wrapped the newborn with clothes, 25.3% said that they oil massaged the newborn, 16.5% said that they breastfed the newborn, 15.8% said that they allowed the newborn to sleep, 9.1% said that they gave Kangaroo care to the newborn, and 4.6% said that they kept the newborn warm by keeping it next to the fire or heater.

E.3. Possible Severe Bacterial Infection (PSBI) in Neonates

According to the WHO, about 32 percent of newborn deaths are caused by infections. Where hygiene is poor, newborns may become infected with bacteria or organisms which can cause serious infections on the skin, umbilical cord, lungs, gastrointestinal tract, brain, or blood. Thus, preventing infection is essential for newborns.

Accordingly, mothers were asked if their neonates had possible severe bacterial infections (PSBI) as diagnosed by FCHVs or health workers within 48 hours of onset. In Parsa 36.4% of neonates and in Sunsari 69.2% of neonates had been diagnosed with PSBI within 48 hours of onset. After diagnosis, none were given oral antibiotics according to mothers in Parsa and 7 neonates (17.9%) were given a first dose of oral antibiotics in Sunsari. 2.6% and 17.9% of mothers from Sunsari gave oral antibiotics within 48 hours of onset for three days and for 3-5 days, respectively. (Table 4.24)

Table 4.24: Distribution of neonates with possible severe bacterial infection

	Parsa District (n=11)		**Sunsari District (n=39)**	
	No.	%	No.	%
Diagnosed by a health worker or FCHV within 48 hours of onset	4	36.4	27	69.2
Given a first dose of oral antibiotics within 48 hours of onset	0	0	7	17.9
Given a first dose of oral antibiotics within 48 hours of onset for 3 days	0	0	1	2.6
Given a first dose of oral antibiotics within 48 hours of onset for 3 to 5 days	0	0	7	17.9

E.4. Care of the Child during Postnatal Checkup

The health checkup of neonates during the postnatal visit is fundamental in the health and survival of neonates. The national Safe Motherhood Programme has recommended three PNC checkups. In this study, information upto two PNC visits where the neonate's health was checked up are presented. The mothers were asked if their newborn was checked during PNC visit. It was found that in both the districts more than half of them had reported negatively. In Parsa 31.6% and in Sunsari 43.5% had their neonates checked during PNC. (Table 4.25)

Among those neonates who had undergone checkup most of them had undergone checkup within 24 hours after birth in Parsa (91.0%) and in Sunsari (80.0%). There were mothers who had their newborn checked after 7 days. They were 5.1% in Parsa and 10.5% in Sunsari.

Types of health workers involved in the checkup were doctors according to more than half of the mothers in both the districts (in Parsa 56.4% and in Sunsari 61.3%). Few ANMs have also checked the newborns which was more than 14.0% in Parsa and nearly 9.0% in Sunsari. Few AHWs have also checked the newborns which was over 10.0% in both the districts. More than 6.0% mothers from Parsa and more than 3.0% in Sunsari had their newborns checked by MCHWs.

Table 4.25: Distribution of mothers with children 0-5 months by health checkup of infants during first PNC check up

	Parsa District		**Sunsari District**	
	No.	%	No.	%
Yes	78	31.6	124	43.5
No	169	68.4	161	56.5
Total	247	100	285	100
Time of child's first check-up				
Within 24 hrs	71	91.0	99	79.8
Between 24 to 48 hrs	2	2.6	7	5.7
Between 48 to 72 hrs	0	0	1	0.8
Between 72 hrs to 7 days	1	1.3	4	3.2
After 7 days	4	5.1	13	10.5
Total	78	100	124	100
Types of health worker involved in child's first checkup				
Medical Doctor	44	56.4	76	61.3
Staff nurse	7	9.0	10	8.1
HA/ Sr. AHW	1	1.3	1	0.8
AHW	8	10.3	13	10.5
ANM	11	14.1	11	8.9
MCHW	5	6.4	4	3.2
VHW	0	0	1	0.8
Trained TBA	0	0	2	1.6
Others	2	2.5	6	4.8
Total	78	100	124	100

Mothers who had undergone second PNC checkup were asked whether their neonates were also checked. Forty eight percent of the mothers in Parsa and nearly 42.0% in Sunsari said that their children were not checked during second ANC visits. Mothers who had newborn checked up during second PNC checkup between 24- 48 hours after birth were found to be 24.0% in Parsa and 18.6% in Sunsari. Those who had their newborn checked within 24 hours were 5.2% in Parsa and nearly 16.9% in Sunsari. (Table 4.26)

The mothers were asked if the health problems of the newborn were diagnosed. Almost 86.0% mothers in Parsa and 69.0% mothers in Sunsari said that health problems of their neonates were not diagnosed.

Table 4.26: Distribution of mothers with children 0-5 months by time of child checked up during second PNC

	Parsa District		Sunsari District	
Time of child's second check up	No.	%	No.	%
Within 24 hrs	4	5.2	21	16.9
Between 24 to 48 hrs	19	24.7	23	18.6
Between 48 to 72 hrs	6	7.8	1	0.8
Between 72 hrs to 7 days	6	7.8	5	4.0
After 7 days	5	6.5	22	17.8
Never	38	48.0	52	41.9
Total	78	100	124	100
Diagnosed health problem				
Yes	11	14.1	39	31.5
No	67	85.9	85	68.5
Total	78	100	124	100
Unable to suck the milk	7	63.6	13	33.3
Convulsion /lethargic condition	3	27.3	16	41.0
Respiratory rate >60 per minute	1	9.1	6	15.4
Severe chest indrawing	0	0	3	7.7
Ten or more blisters with pus or 1 big abscess	0	0	1	2.6
Types of medicines provided				
Cotrim /other antibiotics	0	0	16	42.1
Others	6	54.6	12	31.6
Do not know	5	45.4	11	26.3
Total	11	100	39	100

Of the health problems diagnosed 63.6% in Parsa and 33.3% in Sunsari said that the newborn was unable to suck milk. Convulsion and lethargic condition was diagnosed in 27.3% in Parsa and 41.0% in Sunsari. Respiratory rate more than 60 per minute was reported in 9.1% newborn in Parsa and 15.4% newborn in Sunsari by the mothers. Cotrim and antibiotics was provided according to 42.1% mothers in Sunsari and none in Parsa district for the treatment of health problems seen in the neonates.

E.5. Knowledge and Use of Chlorhexidine

Chlorhexidine is an antiseptic effective against gram positive bacteria (staphylococcus and streptococcus). Mothers were asked if they knew how to apply chlorhexidine on the umbilical stump.

Depending on the customs and tribes of people substance applied on the umbilical stump is different. Ash is applied according to 2.8% mothers in Sunsari, oil is applied according to 5.3% in Parsa and 9.5% in Sunsari, oil and turmeric is applied according to 0.4% in Parsa and Sunsari.

Gentian violet and Mercurochrome are applied by almost 27.0% in Parsa and 6.0% in Sunsari. Nearly 1.0% in Parsa mentioned using soap water. There were still mothers who mentioned nothing being used, 36.4% in Parsa and 61.7% in Sunsari said that they did not use anything over the stump. Chlorhexidine is not applied in umbilical stumps in both the districts and their knowledge was also lacking among the mothers interviewed. (Table 4.27)

Table 4.27: Distribution of mothers with children 0-5 months by types of materials used in umbilical stump

	Parsa District		Sunsari District	
Substance applied on umbilical stump	No.	%	No.	%
Chlorhexidine	0	0	0	0
Ash	0	0	8	2.8
Oil	13	5.3	27	9.5
Oil with turmeric	1	0.4	1	0.4
Soap water	2	0.8	0	0
Gentian violet/Mercurochrome paint	66	26.7	16	5.6
Others	75	30.4	57	20.0
Nothing	90	36.4	176	61.7
Total	247	100	285	100

E.6. Knowledge of Mothers on Danger Signs in Neonates

Danger signs in a newborn maybe a sign of serious illness. Serious illness may lead rapidly to death which could have been easily prevented with few simple interventions. The mothers should have knowledge on recognizing such danger sign and response immediately. The mothers were asked if they had knowledge on the danger signs requiring treatment commonly seen in the neonates.

About one third in both districts mentioned severe chest indrawing as the danger signs in neonates, 33.6% in Parsa ad 30.2% in Sunsari. This was followed by not being active - 24.7% in Parsa and 19.0% in Sunsari. Fast breathing as the danger signs in the neonate was reported by 16.6% in Parsa and 25.6% in Sunsari. The knowledge of mothers on at least two danger signs and symptoms in neonates requiring treatment are 77.3% in Parsa and only 22.0% in Sunsari had knowledge on at two danger signs.

Table 4.28: Distribution of mothers with children 0-5 months by knowledge on danger signs among neonates

Danger signs reported by mothers indicating newborn is sick	Parsa District		Sunsari District	
	No.	%	No.	%
Poor feeding	19	7.7	33	11.6
Fast breathing	41	16.6	73	25.6
Severe chest indrawing	83	33.6	86	30.2
Not active	61	24.7	54	19.0
Red/discharging eyes	32	13.0	29	10.2
Diarrhea	8	3.2	7	2.5
Vomiting	3	1.2	2	0.6
Unable to open mouth	0	0	1	0.3
Signs of the illness reported by mothers requiring immediate treatment				
Unable to suck breast	16	6.5	31	10.9
Convulsion / lethargic condition	58	23.5	81	28.4
Respiratory rate > 60 per minute	80	32.4	115	40.4
Severe chest indrawing	55	22.3	45	15.8
Fever	30	12.1	11	3.9
Infected umbilical stump	8	3.2	1	0.3
Weak or unable to cry	0	0	1	0.3
Total	247	100	285	100
Knowledge of at least two danger signs in neonates	*191*	*77.3*	*73*	*25.6*

F. Threshold and Decision Rules

Initial threshold/benchmark for assessing the indicators were selected using average proportion obtained by aggregating the data of all 13 supervisory areas (12 Ilakas and 1 municipality) collected in February 2008 in Parsa and 15 supervisory areas (12 Ilakas and 3 municipalities) collected in January 2008 in Sunsari. The outcomes of the decision rules and the threshold are given in Appendix 5.

Table 4.29 shows the supervisory areas which are substandard against program average for key MNC indicators, and Table 4.30 shows the substandard indicators against program average indicators by supervisory areas.

Table 4.29: Supervisory Areas which are substandard against Program Average by MNC Indicators (0-5 Months Module)

SN	Indicator	Parsa District (SA=13)		Sunsari District (SA=15)	
		No.	%	No.	%
A	*Antenatal Care Indicators*				
1	Percentage of mothers protected against tetanus by getting second dose of TT vaccine.	1	7.7	3	20.0
2	Percentage of mothers of children aged 0-5 months with 4 times antenatal visit (up to ANM)	2	15.4	3	20.0
3	Percentage of mothers of children aged 0-5 months with 4 times anti-natal visit (up to MCHW)	1	7.7	3	20.0
4	Percent of children aged 0-5 months know at least 1 counseled during antenatal checkup	2	15.4	1	6.7
5	Percent of mothers of children aged 0-5 months having a birth preparedness plan already coordinated with their closest skilled childbirth provider during their pregnancy	4	30.8	2	13.3
6	Percent of mothers of children aged 0-5 months receiving iron/folate tablets during their pregnancy (at least 6 months)	1	7.7	2	13.3
7	Percent of mothers of children aged 0-5 months receiving a single dose of albendazole (400 mg) after completion of three month of last pregnancy	4	30.8	1	6.7
8	Percent of mothers of children aged 0-5 months who know at least two danger signs during pregnancy	4	30.8	2	13.3
B	*Delivery Care Indicators*				
1	Percent of mothers of children aged 0-5 months who know at least two danger signs during delivery	2	15.4	0	0
2	Percent of mothers who delivered at health institutions	0	0	5	33.3
3	Percent of birth delivery providers who washed their hands with soap before assisting in procedure				

C	*Postnatal Care*				
1	Percent of new mothers with children aged 0-5 months (and their newborns) who received a first checkup by a skilled provider within the first TWO days of birth (up to ANM)	2	15.4	3	20.0
2	Percent of new mothers with children aged 0-5 months (and their newborns) who received a first checkup by a skilled provider within the first TWO days of birth (up to MCHW)	2	15.4	3	20.0
3	Percent of new mothers with children aged 0-5 months (and their newborns) who received a second post-natal checkup by a skilled provider 3-7 days after birth (up to ANM)	10	76.9	13	86.7
4	Percent of new mothers with children aged 0-5 months (and their newborns) who received a second post-natal checkup by a skilled provider 3-7 days after birth (up to MCHW)	10	76.9	13	86.7
5	Percent of mothers receiving vitamin A after 45 days of delivery	2	15.4	1	6.7
D	*Neonatal Care*				
1	Percent of mothers who had ever breast-fed their newborn	13	100.0	15	100.0
2	Percent of mothers who had breast-fed their newborn within one hour of birth	0	-	3	20.0
3	Percent of mothers who had breastfed their new born within 8 hours of birth	4	30.8	5	33.3
4	Percent of mothers who fed colostrums to their newborn	4	30.8	1	6.7
5	Percent of mothers whose children received Vitamin A caps within 48 hours after birth	13	100.0	12	80.0
6	Percent of newborns immediately after birth, who were dried off, exposed to a heating source (including kangaroo care) and avoided bathing for 24 hours	4	30.8	3	20.0
7	Percentage of pregnant women who knew how to apply chlorhexidine on the umbilical stump	13	100.0	15	100.0
8	Percentage of newborns whose umbilical stump was first applied with chlorhexidine 4% within 24 hours of birth.	13	100.0	15	100.0
9	Percent of mothers of with knowledge of at least two danger signs in neonates indicating that child is sick	3	23.1	3	20.0
10	Percent of mothers with knowledge of at least one danger sign in neonate requiring medical treatment	2	15.4	0	0

Table 4.30: Substandard Indicators against 26 Program Average Indicators by Supervisory Areas (0-5 Months Module)

SN	Supervisory Areas			Supervisory Areas		
	Parsa District	**No.**	**%**	**Sunsari District**	**No.**	**%**
1	Thori	7	26.9	Itahari	6	23.1
2	Sedhawa	5	19.2	Itahari MNC	6	23.1
3	Nichuta	7	26.9	Dharan MNC	7	26.9
4	Bagahi	5	19.2	Chatara	6	23.1
5	Bageshwori	13	50.0	Madhuwan	9	34.6
6	Bisrampur	8	61.5	Harinagara	13	50.0
7	Bhikhampur	10	38.5	Satterjhora	3	11.5
8	Langadi	15	57.7	Inaruwa	15	57.7
9	Pokhariya	6	23.1	Inaruwa MNC	4	15.4
10	Pakaha	5	19.2	Prakaspur	6	23.1
11	Sirsiya	7	26.9	Bakalauri	5	19.2
12	Birgunj	9	34.6	Madhelee	6	23.1
13	Birgunj MNC	7	26.9	Sitagunj	8	61.5
14	-	-	-	Dewagunj	11	38.5
15	-	-	-	Bhutaha	7	26.9

Chapter V: Results of LQAS Survey Module 2 - Mothers of Children 0-23 Months

The results of LQAS Baseline Survey conducted in Program Districts Parsa and Sunsari are presented in this chapter. This chapter deals with Module 2 Questionnaire - that is the information collected from mothers with children aged 0-23 months.

A. Socio-demographic Characteristics

For this study, mothers from Parsa and Sunsari were interviewed. In the survey socioeconomic characteristics of participating mothers were taken into consideration.

A.1. Mother's Age

The age of the mothers was mostly between 20 to 34 years. (Table 5.1) The mothers between these ages were more than 79.80% in Parsa and 87.3% in Sunsari. Beyond these ages, the percentage of mothers was comparatively lower. In Parsa, there were only about 15.8% mothers that are less than 20 years of age and in Sunsari still less, about 8.1%. Both in Parsa and Sunsari nearly 5.0% mothers were over 35 years of age. The mean ages of the participating mothers were 23.8 years for Parsa and 24.4 years for Sunsari.

Table 5.12: Distribution of mothers with children 0-23 months by their ages

Age (in years)	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
15-19	39	15.8	23	8.1
20-24	113	45.8	136	47.7
25-29	62	25.1	90	31.6
30-34	22	8.9	23	8.0
35-39	9	3.6	13	4.6
40-44	1	0.4	0	0
45+	1	0.4	0	0
Total	247	100	285	100
Mean	23.8	-	24.4	-

A.2. Mother's Education

Education plays an important role in one's behavior, attitude and knowledge. Table 5.2 shows the distribution of mothers by educational attainment. Mothers that were illiterate were 73.3% in Parsa and 51.2% in Sunsari. Mothers who were educated till secondary level were more than 9.3% in Parsa and almost 24.6% in Sunsari. Those educated till primary level is almost 11.3% in Parsa and almost 13.6% in Sunsari. Education till higher secondary level was almost 1.0% in Parsa and almost 13.0% in Sunsari. Mothers with university level education were almost 0.8% in Parsa and 1.0% in Sunsari.

Table 5.2: Distribution of mothers with children 0-23 months by educational status

Educational Status	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Illiterate	181	73.3	146	51.2
Informal education	11	4.5	14	4.9
Primary level	28	11.3	37	13.0
Secondary level	23	9.3	70	24.6
Higher secondary level	2	0.8	15	5.3
University level	2	0.8	3	1.0
Total	247	100	285	100

A.3. Mother's Occupation

Most of the mothers in these districts were mostly housewives. (Table 5.3) In Parsa 78.1% mothers and in Sunsari 63.1% mothers were housewives. Very few mothers 14.6% in Parsa about 14.0% and 19.3% in Sunsari were farmers. There were still mothers who worked as laborers, in Parsa 4.9% and in Sunsari 12.3%.

Table 5.3: Distribution of mothers, with children 0-23 months by occupation

Major Occupation of Mother	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Agriculture	36	14.6	55	19.3
Service	3	1.2	3	1.1
Business	3	1.2	12	4.2
Labor	12	4.9	35	12.3
Housewife	193	78.1	180	63.1
Total	247	100	285	100

A.4. Sex Ratio of Children

The sex ratio of the children born to mothers is comparable. In Parsa, 50.6% were male and 49.4% were female. Similarly in Sunsari male were 56.5% and female were 43.5%.

Table 5.4: Distribution of mothers with children 0-23 months by sex of their youngest child

Sex of the youngest child	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Male Child	125	50.6	161	56.5
Female Child	122	49.4	124	43.5
Total	247	100	285	100

The distribution of mothers by number of children less than 24 months of age in the survey areas are given in Table 5.5. More than a third (36.4%) in Parsa and about half (44.6%) in Sunsari had children under 6 months of age. The mean ages were 9.8 months in Parsa and 8.2 months in Sunsari.

Table 5.5: Distribution of mothers, with children 0-23 months by age of their youngest child

Child's Age (in months)	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
0-5	90	36.4	127	44.6
6-10	40	16.2	53	18.6
11-15	58	23.5	56	19.6
16-20	45	18.2	38	13.3
21 and above	14	5.7	11	3.9
Total	247	100	285	100
Mean	9.8		8.2	

B. Antenatal Care

Mothers with children of the age 0-23 months were asked various questions regarding mother and child's health. As part of ANC program, pregnant women were advised to take TT which protects both mother and fetus from tetanus. The results showed that the percentage of mothers receiving at least two doses Tetanus Toxoid was 93.5% in Parsa and 91.9% in Sunsari district. (Table 5.6)

Table 5.6: Distribution of mothers with children 0-23 months who had received TT2 injection before child birth

Received TT2 injection before childbirth	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Yes	231	93.5	262	91.9
No	15	6.1	23	8.1
Don't know	1	0.4	0	0
Total	247	100	285	100
Received TT at any time before that pregnancy				
Yes	197	80.1	206	72.3
No	46	18.7	76	26.7
Don't know	3	1.2	3	1.0
Total	246	100	285	100
Number of times TT2 injection received				
One	195	99.0	198	96.1
Two	2	1.0	8	3.9
Total	197	100	206	100

C. Delivery Care

Mothers were asked about the attendants who had assisted them at the time of delivery. In Parsa 36.4% said that they were attended by skilled birth attendants (doctor, nurse/midwife or other health workers) and in Sunsari 47.4% said so. (Table 5.7)

Table 5.7: Distribution of mothers, with children 0-23 months by types of birth attendants

Person who assisted during delivery	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Health Workers (Doctor, Nurse, ANM, and other health staff)	90	36.4	135	47.4
Others (TBA, CHW, Family, Friend and Relatives)	157	63.6	150	52.6
Total	247	100	285	100

D. Postnatal Care

Mothers were asked whether they had visited health facilities for postnatal care or if they had been seen by any trained health workers three days after delivery. The results are given in Table 5.8. Percentage of children who received a postnatal visit from an appropriate trained health worker within three days after birth is 27.9% in Parsa and 43.2% in Sunsari.

Table 5.8: Distribution of mothers, with children 0-23 months by PNC check up

Postnatal visits	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Mothers receiving post-natal visit from an appropriate trained health worker within three days after birth	69	27.9	123	43.2

E. Breast/Infant Feeding and Nutrition

Mothers in Parsa and Sunsari were asked if they had exclusively breastfed their newborn during the last 24 hours. It was found that 80.7% in Parsa and 67.7% in Sunsari exclusively breastfed their newborn during the last 24 hours. The babies are considered exclusively breastfed if they are fed only at the breast and not given any thing even water, tea, herbal drink, infant formula, liquids or food. (Table 5.9)

Table 5.9: Distribution of mothers with children 0-23 months by breast and infant feeding practices

Breast and infant feeding practices	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Exclusive Breastfeeding: Children aged 0-5 months who were exclusively breastfed during the last 24 hours	71	80.7	86	67.7
Infant and Young Child Feeding: Children aged 6-23 months who were fed according to a minimum of appropriate feeding practices	51	32.5	110	69.6

WHO has recommended the introduction of solid food to infants around the age of six months because by that age breast milk by itself is no longer sufficient to maintain a child's optimal growth. Children 6-23 months were fed following minimum appropriate feeding practices. Mothers were asked if they followed appropriate feeding practices. It was found that in Parsa only about 32.5% mothers and in Sunsari about 69.6% mothers said that they followed appropriate feeding practice to some extent. (Table 5.9)

E.1. Nutrition Status: Weight for Age

The weight of the child is one of the indicators of the child's health. The percentage of children 0-23 months of age who were less than one standard deviation from the median weight of children for their age is considered as underweight according to WHO/NCHS reference population. It was found that children who were underweight according to these criteria were almost 10.5% in Parsa and 13.0% in Sunsari.

Table 5.10: Distribution of mothers, with children 0-23 months by nutritional status of their children (Weight for Age)

Underweight children	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Children aged 0-23 months who are underweight (-SD for the median weight for age, according to WHO/NCHS reference population)	26	10.5	37	13.0

F. Immunization

Universal immunization of children against the six vaccine-preventable diseases, namely tuberculosis, diphtheria, whooping cough, tetanus, polio and measles is crucial to reducing infant and child mortality. According to WHO guidelines, children are considered fully immunized when they have received one dose of the vaccine against tuberculosis (BCG), three doses each of the DPT and polio vaccines and one dose of measles vaccine. BCG is given at birth or at first clinical contact: DPT and polio require three doses at approximately 6, 10 and 12 weeks of age. Measles vaccine is given soon after 9 months of age.

F.1. Measles

Mothers with children of the age 12-23 months were asked if their children have received measles vaccine. The results are based on vaccination cards where available and as recalled by the mothers. Accordingly about 77.6% children in Parsa and 85.9% children in Sunsari had been immunized against measles according to vaccination cards or as recalled by the mothers. When examined by the evidence of vaccination cards only, the results turned out to be 10.3% in Parsa and about 21.7% in Sunsari. (Table 5.11)

Table 5.11: Distribution of children aged 12-23 months by measles vaccination

Measles vaccination	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Children aged 12-23 months who received measles vaccine according to the vaccination card or mother's recall by the time of the survey	83	77.6	79	85.9
Children aged 12-23 months who received measles vaccine according to the vaccination card by the time of the survey (Card coverage)	11	10.3	20	21.7

F.2. DPT

Immunization of DPT1 is taken as the indicator for access to immunization services. The distribution of children 12-23 months who had received DPT1 as reported by mothers and vaccination card is 87.9% in Parsa and 94.6% in Sunsari. While only card coverage is taken into account this indicator becomes 18.7% in Parsa and 31.5% in Sunsari. (Table 5.12)

Table 5.12: Distribution of children aged 12-23 months by DPT1 immunization

Access to Immunization Services	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Children aged 12-23 months who received DPT1 according to the vaccination card or mother's recall by the time of the survey	94	87.9	87	94.6
Children aged 12-23 months who received DPT1 according to the vaccination card by the time of the survey (Card Coverage)	20	18.7	29	31.5

Likewise, DPT3 is a proxy indicator for health system performance for immunization services. The distribution of children aged 12-23 months who received DPT3 according to vaccination card or mothers recall is 80.4% in Parsa and 88.0% in Sunsari. When only the card coverage is taken into consideration, this indicator becomes 15.9% in Parsa and 30.4% in Sunsari. (Table 5.13)

Table 5.13: Distribution of children aged 12-23 months by DPT3 immunization

Health Systems Performance regarding Immunization Services	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Children aged 12-23 months who received DPT3 according to the vaccination card or mother's recall by the time of the survey	86	80.4	81	88.0
Children aged 12-23 months who received DPT3 according to the vaccination card by the time of the survey (Card Coverage)	17	15.9	28	30.4

F.3. Vitamin A Supplementation

Night blindness is a disease due to lack of Vitamin A in diet. The national program on Vitamin A covers distribution of Vitamin A capsules to the children aged 6-23 months throughout the country. In this survey, the mothers having children 0-23 months were asked if their children received a dose of Vitamin A when they were 6-23 months of age in the last 6 months period. The results are given in Table 5.14. The percentage of children who received Vitamin A supplement in the last 6 months as evidenced by the card and mothers' recall was 70.7% in Parsa and 87.3% in Sunsari.

Table 5.14: Distribution of children aged 12-23 months who had received Vitamin A Supplementation

Vitamin A Supplementation	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Children aged 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall	111	70.7	138	87.3

G. Diarrhea

Exposure to diarrhea causing organisms is through contaminated water and unhygienic practices in food preparation and disposal of excreta. Dehydration caused by severe diarrhea is a major cause of morbidity and mortality among young children, although the condition can be treated with oral rehydration therapy (ORT).

Mothers were asked if their children (0-23 months) had any episode of simple diarrhea (non bloody) during the last two weeks preceding the survey and if so what sort of treatment they had been given. The results are presented in Table 5.15.

Table 5.15: Distribution of mothers with children 0-23 months reporting childhood diarrhea in last 2 weeks and treatment given

Diarrhea in last 2 weeks	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Yes	34	13.8	57	20.0
No	213	86.2	228	80.0
Total	247	100	285	100
Types of liquid given during diarrhea				
Fluid from ORS packet	9	26.5	18	31.6
ORS liquid	0	0	2	3.5
Homemade fluid	1	2.9	7	12.3
ORT use: Children aged 0-23 months with diarrhea in the last two weeks who received oral rehydration solution and/or recommended home fluids	*10*	*29.4*	*27*	*47.4*

Of 247 children 34 (13.8%) had simple diarrhea in the last two weeks period preceding the survey in Parsa district. Likewise the figure is 20.0% in Sunsari. The mothers were asked if they had been given following liquids to the children during diarrhea - fluid for ORS packet, ORS liquid or homemade solution. The percentage of children aged 0-23 months with diarrhea and receiving oral rehydration solution and/or recommended homemade fluid is 29.4% in Parsa and 47.4 Sunsari.

H. Acute Respiratory Infection (ARI)

Acute Respiratory Infection (ARI) is a leading cause of childhood morbidity and mortality throughout the world. Early diagnosis and treatment with antibiotics can reduce the number of deaths caused by ARIs particularly deaths resulting from pneumonia. Pneumonia has emerged as the leading cause of death among children under the age five in Nepal. Children, who had an illness with cough that comes from the chest in the last two weeks preceding the survey, were 36.0% in Parsa and 43.7 % in Sunsari. (Table 5.16)

Of these children, those who had trouble breathing or breathe faster than usual with short or fast breath were 47.2% in Parsa and 53.2% in Sunsari. Further, the mothers were asked if their children suffering from chest related cough and fast and/or difficult breathing in the last two weeks were taken to an appropriate health workers to seek advice. The results showed that 78.1% in Parsa and 87.9% in Sunsari had sought advice. If this rate is calculated with the number of child with chest related cough, it becomes 36% and 46.8% in Sunsari.

Table 5.16: Distribution of mothers with children 0-23 months reporting childhood illness with a cough that comes from the chest in the last two weeks

Child had an illness with a cough that comes from the chest	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Yes	89	36.0	124	43.7
No	158	64.0	160	56.3
Total	247	100	284	100
Child has trouble breathing or breathe faster than usual with short, fast breaths				
Yes	42	47.2	66	53.2
No	47	52.8	58	46.8
Total	89	100	124	100
Seek advice for child for breathing problems				
Yes	32	78.1	58	87.9
No	10	22.9	8	12.1
Total	42	100	66	100
Health worker advised for breathing problems				
Yes	32	100.0	57	98.3
No	0	0	1	1.7
Total	32	100	58	100
Appropriate Care Seeking for Pneumonia: % of children aged 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider	32	36.0%	58	46.8%

In almost all cases, the health workers gave advice for breathing problems, 100% in Parsa and 98.3% in Sunsari.

I. Malaria and Its Prevention

Fever is a major manifestation of malaria and other acute infections in children. While fever can occur year round, malaria is more prevalent after the end of the rainy season particularly in the terai and inner terai and basins of the hilly region of Nepal. Malaria is a major contributory cause of death in infancy and childhood in many developing countries. The treatment with antimalarial medication is advocated in many countries where malaria is endemic. Both Parsa and Sunsari are terai areas of Nepal where malaria is endemic. Mothers were asked if their children had been ill with fever at any time during the last two weeks preceding the survey. The result showed that 21.5% in Parsa and 31.6% in Sunsari had child suffering from fever. (Table 5.17) The mothers were further asked if any drugs were prescribed for them. Forty one out of 53 (77.4%) in Parsa and 75 out of 90 (83.3%) in Sunsari said that the children were given medicines after fever. The time of giving treatment was usually after one or more days.

The percentage of children aged 0-23 months with a febrile episode during the last two weeks who were treated with an effective anti-malarial drug within 24 hours after the fever began were 43.4% in Parsa and 36.7% in Sunsari.

Table 5.17: Distribution of mothers aged 0-23 who reported that their child has been ill with fever at any time in the last 2 weeks

Child became ill with fever at any time in the last 2 weeks	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Yes	53	21.5	90	31.6
No	193	78.1	192	67.4
Do not know	1	0.4	3	1.0
Total	247	100	285	100
Taken any drugs for the fever				
Yes	41	77.4	75	83.3
No	12	22.6	15	16.7
Total	53	100	90	100
Time of seeking treatment after fever				
Same day	9	22.0	12	16.0
Next day	23	56.0	33	44.0
Two or more days	9	22.0	30	40.0
Total	41	100	75	100
Treatment of Fever in Malaria Zones: % of children aged 0-23 months with a febrile episode during the last two weeks who were treated with an effective anti-malarial drug within 24 hours after the fever began	*23*	*43.4*	*33*	*36.7*

The mothers were asked if they did anything to prevent from mosquitoes, particularly the use of mosquito nets. The results showed that 77.3% in Parsa and 73.3% in Sunsari reported that they possessed mosquito nets in their homes. The child who used mosquito net last night preceding the survey date was 68.1% in Parsa and 56.0% Sunsari. About 22.0% in Parsa and 29.0% in Sunsari did not use nets the night preceding the survey. The use of insecticide treated mosquito net (ITN use) was not found in the survey areas.

Table 5.18: Distribution of households having mosquito nets and its use

Household with mosquito nets	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Yes	191	77.3	209	73.3
No	56	22.7	76	26.7
Total	247	100	285	100
Person who used mosquito net last night				
Child	130	68.1	117	56.0
Other	18	9.4	31	14.8
No one	43	22.5	61	29.2
Total	191	100	209	100
ITN Use: % of children aged 0-23 months who slept under an insecticide-treated bed net the previous night	*0*	*0*	*0*	*0*

J. Drinking Water and Hand-washing Behavior

Water is a source for many diseases. Treating water before drinking can reduce the risk of many diseases. The mothers were asked if they treated water before drinking. The results of the survey revealed that very few in Parsa (8.1%) and relatively more in Sunsari (35.9%) treated water in any way for drinking purposes. Of those who treated water, 75.0% in Parsa and 94.1% in Sunsari were doing so effectively. When this indicator was calculated using the total households the result becomes 6.1% and 33.7% in Sunsari. (Table 5.19) Percent of households that have treated water effectively were almost 7.0% in Parsa and nearly 38.0% in Sunsari.

Table 5.19: Distribution of mothers with children 0-23 months reporting treating water for drinking

Treat water in any way to make it safe for drinking	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Yes	20	8.1	102	35.9
No	227	91.9	183	64.1
Total	247	100	285	100
Treat water effectively to make it safe for drinking				
Yes	15	75.0	96	94.1
No	5	25.0	6	5.9
Total	20	100	102	100
Point of Use: % of households of children aged 0-23 months that treat water effectively	*15*	*6.1*	*96*	*33.7*

Hand washing especially with soap, is encouraged as a simple and highly effective means to prevent from water borne diseases. Washing hands frequently is a good practice and therefore mothers were asked during the survey if they actually washed their washed their hands and if so when and how. It was found that they commonly washed after defecation and after attending the child who has defecated.

Households with soap at the place for hand washing were found in 69.4% of the households 58.0% in Parsa and 79.2% in Sunsari.

Table 5.20: Distribution of mothers with children 0-23 months by place for hand washing and things used to wash hands

Places to wash hands	**Parsa District**		**Sunsari District**	
	No.	%	No.	%
Inside/near toilet	2	0.8	1	0.4
Inside/near kitchen	8	3.2	6	2.1
Elsewhere in yard	96	38.9	118	41.4
Outside yard	89	36.0	134	47.0
No specific place	52	21.1	26	9.1
Total	247	100	285	100
Things to wash hands				
Soap	138	69.4	206	79.2
Detergent	4	2.0	0	0
Ash	15	7.5	7	2.7
Mud/sand	15	7.5	12	4.6
None	23	13.6	34	13.5
Total	195	100	259	100
Appropriate Hand Washing Practices: % of mothers of children aged 0-23 months who live in households with soap or detergent at the place for hand washing	*142*	*57.5*	*206*	*72.3*

The appropriate hand-washing practices, that is the percentage of mothers of children aged 0-23 months that live in households with soap or detergent at the place for hand washing was 57.5% in Parsa and 72.3% in Sunsari.

K. Threshold and Decision Rules

Initial threshold/benchmark for assessing the indicators were selected using average proportion obtained by aggregating the data of all 13 supervisory areas (12 Ilakas and 1 municipality) collected in February 2008 in Parsa and 15 supervisory areas (12 Ilakas and 3 municipalities) collected in January 2008 in Sunsari. The results are presented in Tables 5.21 and 5.22.

Table 5.21: Supervisory Areas which are substandard against Program Average by MNC Indicators (0-23 Months Module)

SN	**Indicator**	**Parsa District (SA=13)**		**Sunsari District (SA=15)**	
		No.	%	No.	%
A	*Antenatal Care*				
1	Tetanus Toxoid: % of mothers with children age 0-23 months who received at least 2 tetanus toxoid vaccinations before the birth of their youngest child	1	7.7	1	6.7
B	*Delivery Care*		7.7		
1	Skilled Delivery Assistance: % of children age 0-23 months whose births were attended by skilled personnel	1	7.7	3	20.0

SN	Indicator	Parsa District (SA=13)		Sunsari District (SA=15)	
		No.	%	No.	%
C	*Postnatal Care*				
1	Post-Natal Visit to Check on the Newborn: % of children age 0-23 months who received a post-natal visit from an appropriate trained health worker within three days after birth	1	7.7	4	26.7
D	*Water and sanitation*				
1	Point of Use: % of households of children age 0-23 months that treat water effectively	6	46.2	4	26.7
2	Appropriate Hand Washing Practices: % of mothers of children age 0-23 months who live in households with soap at the place for hand washing	5	38.5	3	11.5
E	*Malaria prevention*				
1	ITN Use: % of children age 0-23 months who slept under an insecticide-treated bed net the previous night	13	100.0	15	57.7
F	*Nutrition*				
1	Underweight: % of children age 0-23 months who are underweight (-SD for the median weight for age, according to WHO/NCHS reference population)	2	15.4	2	7.7

Table 5.22: Substandard Indicators against 26 Program Average Indicators by Supervisory Areas (0-23 Months Module)

SN	Supervisory Areas			Supervisory Areas		
	Parsa District	No.	%	Sunsari District	No.	%
1	Thori	2	7.7	Itahari	1	3.8
2	Sedhawa	3	11.5	Itahari MNC	1	3.8
3	Nichuta	1	3.8	Dharan MNC	1	3.8
4	Bagahi	3	11.5	Chatara	3	11.5
5	Bageshwori	4	15.4	Madhuwan	3	11.5
6	Bisrampur	2	7.7	Harinagara	4	15.4
7	Bhikhampur	3	11.5	Satterjhora	1	3.8
8	Langadi	4	15.4	Inaruwa	5	19.2
9	Pokhariya	1	3.8	Inaruwa MNC	1	3.8
10	Pakaha	1	3.8	Prakaspur	2	7.7
11	Sirsiya	1	3.8	Bakalauri	1	3.8
12	Birgunj	2	7.7	Madhelee	1	3.8
13	Birgunj MNC	1	3.8	Sitagunj	1	3.8
14	-	-	-	Dewagunj	4	15.4
15	-	-	-	Bhutaha	5	19.2

Chapter VI: Results of Rapid Health Facility Assessment Survey

This chapter deals with the core indicators generated from the analysis of the information collected in the Rapid Health Facility Assessment (RHFA) survey carried out in Sunsari district The RHFA survey was not done in Parsa district. The generic RHFA has 22 indicators, 12 core and 10 optional indicators. In this exercise all these 22 indicators are not assessed. The survey team reviewed each indicator, identified issues regarding quality and limitation of the data and selected only viable and feasible indicators. These 22 indicators are meant to provide rapidly and feasibly a 'Balanced Score Card' for preparedness of first- level health facilities to provide the three essential child health services, namely growth monitoring and promotion (GMP) expanded program on immunization (EPI) and sick-child care. This is balanced score card in the sense that it examine the indicators across the variety of domains necessary for basic health facility functioning, access process and inputs process and performances.

A total of 25 health facilities in Sunsari district below the district level (1 PHCC, 2 HPs, and 22 SHPPs) were visited, observed the facilities and the cases being seen and treated, critically reviewed the registers and interviewed the health workers and the clients (patients themselves and/or caretaker of the patient). Six cases in each health facility were intervened.

A. Access

Under access the following inputs are considered - provision of services, staffing, infrastructure, and equipment and drug supplies.

A.1. Provision of Services

Inadequate access to health services for rural household and limited community involvement remains as the major bottleneck to significantly increase the efficacy of Primary Health Care services (PHC). Considering these constraints Primary Health Care Outreach Clinics (PHC/ORC) were introduced by government in 1995 AD. PHC/ORC clinics are the extensions of HPs and SHPs at the community level. HPs and SHPs send their VHWs and MCHWs or ANMs to a prearranged place close to community to provide basic PHC services. Two to five catchment areas are identified per VDCs and the clinics are conducted once a month.

The health facilities providing immunization services, growth monitoring ANC and delivery services at health facility or through outreach clinics (ORC) are given in Table 6.1. The average number of days the services is available to treat the sick child health at health facilities or through outreach is 30.2 days - 24.4 days through health facilities and 5.8 days through ORC. Similarly for immunization services either from the health facility or through the outreach clinics, the average number of days the services are available is 6.4. On an average 21.5 days are available for growth monitoring services, 23.9 days for ANC services and 29 days delivery services. (Table 6.1)

Table 6.1 Availability of health services by service delivery point

Type of health service	**Average number of days service available per HF**
Sick child health service at health facility	24.4
Sick child health service through outreach	5.8
Sick child health service through either health facility or outreach	30.2
Immunization services at health facility	1.5
Immunization services through outreach	4.9
Immunization through either health facility or outreach	6.4

Growth monitoring services at health facility	16.3
Growth monitoring services through outreach	5.2
Growth monitoring through either health facility or outreach	21.5
ANC services at health facility	18.1
ANC services through outreach	5.8
ANC through either health facility or outreach	23.9
Delivery services at health facility	9.8
Delivery services through outreach	19.2
Delivery services through either health facility or outreach	29.0
Availability of child health services - % of health facilities that offer sick child, immunization and, growth monitoring services	**24.0%**
Availability of ANC services - % of health facilities that offer ANC services at least 4 times per month	**100.0%**
Availability of delivery services - % of health facilities that offer delivery services on all days	**68.0%**

The percentage of health facilities that offer sick child care, immunization and growth monitoring services is estimated at 24.0%. With regard to the availability of ANC services the percentage of health facilities that offer ANC services at least four times a month is 100%. Similarly the health facilities that offer delivery services on all days of the weeks are 68%.

A.2. Health Facilities Inputs

The survey assessed six indicators for facility inputs, staffing, infrastructure, supplies drugs guidelines and infection controls.

A.3. Staffing

The average number of staff per health facility by types is presented in Table 6.2. The average number of sanctioned doctors per health facility is zero. This is due to the fact that there is only one PHCC in the sample health facilities. According to government staffing pattern the health facilities below the PHCC level will not have a post sanctioned for a doctor. The percentage of health facilities where all clinical staff is present is 88%. The percentage of clinical staff present per health facility is 95.0%.

Table 6.2 Staffing situation of health facility

Type of staff	**Average number per health facility**		
	Sanctioned	Present	Difference
Doctors	0	0	0
Nurses	0.3	0.2	- 0.1
Midwives	0.2	0.1	- 0.1
Other clinical staff	1.2	1.2	0
Pharmacists	1.0	0.7	- 0.3
Laboratory staff	0.8	0.6	- 0.2
Other staff	1.2	0.9	- 0.3
% of health facilities in which all clinical staff were present	**88.0%**		
% of clinical staff present per health facility	**95.0%**		

A.4. Infrastructures

The infrastructure items assessed in this study are availability of beds, 24 hours staff coverage, functioning emergency communication, emergency transportation, electricity (AC, generator, or solar), usable client latrines, water from protected sources, client consultation area with auditory and visual privacy. Nearly all health facilities lacked one or more components required to meet the criteria of basic infrastructure available or functional on the day of the survey.

Only one health facility has at least one bed, 24 hours staff coverage and usable emergency transport. Forty percent of the health facilities have functioning emergency communications (telephone or nearby PCO facilities) available. Eighty percent of the health facilities have electricity and slightly more than this have water from protected source or potable ground water. Only 8 of the 25 health facilities (32.0%) have latrine water, electricity or privacy facilities found on the day of the survey. Average percentage of essential infrastructure present per health facility is 42.0%.

Table 6.3: Health facilities with essential infrastructure

Health facilities having:	**No.**	**%**
At least one bed	1	4.0
24 hour staff coverage	1	4.0
Functioning emergency communication	10	40.0
Emergency transportation usable	1	4.0
Electricity from the grid or a generator with fuel	20	80.0
Usable client latrine	17	68.0
Water from protected water source or ground water	22	88.0
Auditory and visual privacy	11	44.0
% of health facilities with all essential infrastructure (latrine, water, privacy)	**32.0%**	
Average % of essential infrastructure items present per health facility	**42.0%**	

A.5. Equipment and Other Supplies

Nearly 16% of the health facilities have all essential supplies required for providing child health services. None of the health facilities surveyed have functioning autoclaves while 48.0% have functioning refrigerator. (Table 6.4a) Basic equipment such as an infant scale seems to be problematic in most of the health facilities. Likewise, the most basic supplies such as a jar or a cup or a spoon essential for preparing ORS seems to be unavailable in more than 56.0% of the health facilities.

Table 6.4a: Health facilities having supplies for child health services

HF having supplies of	**No.**	**%**
Functioning autoclave	0	0
Functioning refrigerator	12	48.0
Functioning and accessible infant scale	7	28.0
Functioning and accessible scale for children/adults	23	92.0
Functioning timer or watch	21	84.0
Pitcher for ORS	17	68.0
Cup or spoon for ORS	14	56.0
% of health facility with all essential supplies for child health services (infant scale, adult scale, timer/watch, ORS supplies)	**16.0%**	
Average % of supplies present per health facility	**66.0%**	

The percentage of health facilities with all essential supplies required for providing child health services is 16% and the average percentage of supplies present facilities is 66.0%.

The health facilities having essential supplies for neonatal and delivery services are presented in Table 6.4b). None of the health facilities surveyed have all basic supplies (infant scale, adult scale, timer/watch, ORS supplies) essential for providing neonatal and delivery services. The average percentage of neonatal and delivery supplies per health facility is 6%.

Table 6.4b: Health facilities having supplies for neonatal and delivery service

HF having supplies of	**No.**	**%**
Functioning autoclave	0	0
Functioning neonatal resuscitation equipment	1	4.0
Functioning and accessible infant scale	4	16.0
Functioning vacuum extractor	1	4.0
Neonatal wraps for warming	1	4.0
Partographs	1	4.0
% of health facilities with all basic neonatal & delivery supplies (partographs, vacuum extractor, resuscitation equipment, infant scale, wraps)	**0%**	
Average % of neonatal supplies per health facility	**6.0%**	

Similarly, the health facilities having supplies necessary for providing ANC services was assessed by the team. The assessment included the availability of functioning autoclave, refrigerator, a BP set, Hemoglobin testing reagent, syphilis testing kit and urine albumin test strips. Only 8% of the health facilities have all essential ANC equipment and supplies (Table 6.4c). The average percentage of essential ANC supplies present per health facilities was 33.0%.

Table 6.4c: Health facilities having supplies for ANC service

Health facilities having supplies of	**No.**	**%**
Functioning autoclave	0	0
Functioning refrigerator	12	48.0
Functioning blood pressure equipment	24	96.0
Hemoglobin testing reagents	4	16.0
Syphilis testing kits	2	8.0
Malaria test kits	6	24.0
Urine albumin test strips	2	8.0
% of health facilities with all essential ANC supplies	**8.0%**	
Average % of essential ANC supplies present per health facility	**33.0%**	

A.6. Availability of Drugs

The availability of drug supply at the surveyed health facility was pretty good with 56% of health facilities having stock of essential child health drug available at the time of survey. The essential child health drug list included ORS packet, first line pneumonia drug, dysentery drug, malaria drug, Vitamin A and insecticide treated nets (ITNs). All health facilities have essential child health drugs except ORS in one health facility and dysentery drugs in 10 health facilities when observed for last 6 months record. (Table 6.5a) None of the health facility surveyed had ITNs. The percentage of essential child drugs present per health facility was estimated at 91.0%. There was no stock-out of drugs (ORS, first line pneumonia drug, dysentery drug, malaria drug, and Vitamin A) for last 6 months. (Table not shown).

Table 6.5a: Health facilities having drug supplies for child health service

Health facilities having	**No.**	**%**
ORS packets	24	96.0
First line child pneumonia drug	25	100.0
First line dysentery drug	15	60.0
First line anti-malarial	25	100.0
Vitamin A	25	100.0
Insecticide treated nets	0	0
% of health facilities with all essential child drugs	**56.0%**	
% of essential child drugs present per health facility	**91.0%**	

The health facilities having drug supplies for neonatal health services is given in Table 6.5b. None of the health facilities surveyed had all essential neonatal and delivery drugs. Antibiotics for newborn sepsis and pneumonia were not available at any of the health facility surveyed. Same is the case with Nivirapine a drug used in case of HIV/AIDS infection. Eye ointment for neonates is available in 9 health facilities and Oxytocin in only one facility.

Table 6.5b: Health facilities having drug supplies for neonatal health service

Health facilities having	**No.**	**%**
Antibiotics for newborn sepsis/pneumonia	0	0
Neonatal eye ointment	9	36.0
Oxytocin	1	4.0
Nivirapine (in high HIV prevalence areas only)	0	0
% of health facilities with all essential neonatal & delivery drugs	**0%**	
% of essential neonatal drugs available per health facility	**13.0%**	

There was no stock-out of drugs (antibiotics for newborn sepsis, neonatal eye ointment, Oxytocin and Nivirapine) for last 6 months (Table not shown).

The availability of drugs required for ANC services (TT, Iron/ folate, antimalarial drugs, ITNs) are checked and the results are given in Table 6.5c. The TT vaccination required for pregnant mothers and antimalarial drugs for intermittent presumptive treatment (IPT) was found only in 18 of the 25 health facilities surveyed. None of the health facilities have ITNs. There was no stock out of drugs for the last six months. The percentage of essential ANC drugs available per health facility was estimated at 11.0%.

Table 6.5c: Health facilities having drug supplies for ANC services

Health facilities having:	**No.**	**%**
Tetanus toxoid	18	72.0
Iron / folate	25	100.0
Antimalarial for intermittent presumptive treatment (IPT)	18	72.0
ITNs	0	0
% of health facilities with all essential ANC drugs	**0%**	
% of essential ANC drugs available per health facility	**61.0%**	

A.7. Immunizations

Vaccine supplied was pretty poor as approximately 2/3rd to 3/4th of the health facilities surveyed were stocked out of basic vaccines on the day of the survey. (Table 6.6) The percentage of health facilities with all vaccines available is 68.0%. The percentage of vaccines available per health facility is 74.9%. There was no stock out of vaccines (BCG, OPV and DPT) for last six months. Measles vaccine was reported out of stock in one (4.0%) of the health facility surveyed. (Table not shown)

Table 6.6: Health facilities immunization services available

Health facilities having:	**No.**	**%**
BCG vaccine	19	76.0
OPV oral polio vaccine	19	76.0
DPT vaccine	19	76.0
Measles vaccines	17	68.0
% of health facilities with all vaccines available	**68.0%**	
% of vaccines available per health facility	**74.0%**	

A.8. Health Facilities Having Guidelines for Treatment and Care

The availability of nationally-mandated guidelines for child care, ANC, and delivery services was checked during the assessment survey. The following guidelines are mandatory in health facilities: sick child, immunizations services, delivery services, ANC, post-partum care, neonatal care, P-MTCT (optional). There were no guidelines available in the health facility surveyed. (Table not shown)

A.9. Health Facilities with Infection Control Measures

Infection control supplies and reagents were not available in the health facilities. The following things were checked by the team with regards to infection control measures at health facilities—availability of chlorine or other disinfectant, gloves, sharps container, syringes, needles, soap. Similarly the infection control disposal sites (for sharp objects and for infectious waste) were also not found.

B. Process

The health assessment used four indicators to evaluate the quality of processes in the health facilities, maintenance of the HMIS register, training, supervision and quality assurance.

B.1. HMIS Registers

The following registers were examined: sick child register, ANC register and delivery register. The health facilities with updating of sick child register is given in Table 6.7. Thirty six percent of health facilities had sick child registers with all complete and up to date information on age, diagnosis and treatment. Eighty four percent of the health facility had complete information on age when reviewed records for last three months. Only 40-42% had complete information on diagnosis and treatment.

Table 6.7: Health facilities with updating of Sick Child Register

Status of information sick child register	No.	**%**
Observed child register	25	100.0
Complete information on age for last 3 months	21	84.0
Complete information on diagnosis for last 3 months	10	40.0
Complete information on treatment for last 3 months	11	44.0
Register that have no any category of complete information for last 3 months	4	16.0
Entry in register in last 7 days	21	84.0
All complete and up to date information on age, diagnosis, and treatment	**9**	**36.0**

The use of data was also examined during RHFA survey. The health facilities displaying and using monthly service data is presented in Table 6.8. Twenty percent of the health facilities have the monthly service data displayed on the wall chart and 12% have prepared graphs but not displayed. Sixty four percent of the health facilities reported that they have discussed monthly service data in the meetings. Seven (28%) of the health facilities have not at all used the monthly service data. None of the health facility surveyed had all information system elements in place. There was not a single health facility with all essential information system elements in place.

Table 6.8: Health facilities using data

Monthly service report and use of data	**No.**	**%**
Latest monthly service report observed (less than 3 months old)	25	100.0
Monthly service data used - wall chart	5	20.0
Monthly service data used - graph	3	12.0
Monthly service data used - discussion	16	64.0
Monthly service data used - other methods	1	4.0
Monthly service data NOT used at all	7	28.0
Monthly service data used - by at least one method	0	0.0
% of health facilities with all information system elements in place		**0**
% of essential information system elements in place per health facility		**54.0**

The ANC registers were observed for only 23 health facilities, as the registers for two of the health facilities were not available on the day of the survey. The health facilities with updated ANC registers is given in (Table 6.9). Twenty eight percent of the health facilities had complete TT information and 24% had complete BP information maintained for the last three months as observed ANC registers. There were twelve health facilities with entry for the last seven days in the ANC registers. Likewise twenty delivery registers were observed during the survey. Sixteen (64%) health facilities have complete delivery information for the last three months but when reviewed the updating of the information for the last thirty days, it was found only in 56% of the health facilities. The percentage of health facilities with complete and updated information on ANC and delivery register is 12%. The percentage of maternal and neonatal information elements complete per health facility was 50.0%.

Table 6.9: Health facilities with updating of ANC and Delivery Register

ANC & Delivery Registers - completeness of data	**No.**	**%**
Observed ANC register	23	92.0
Complete TT information of last 3 months	7	28.0
Complete BP information of last 3 months	6	24.0
Incomplete data element for last 3 months	7	28.0
ANC register with entry in last 7 days	12	48.0
Observed Delivery register	20	80.0
Complete delivery information for last 3 months	16	64.0
Delivery register up to date (entry in last 30 days)	14	56.0
% of health facilities in which ANC Register info on delivery, TT, and BP is complete and up to date & delivery register is present and up to date		**12.0**
% of maternal and neonatal information elements complete per health facilities		**50.0**

B.2. Training and Supervision

Of the total 25 health workers interviewed, seven health workers reported receiving any maternal and neonatal training in the last 12 months. Among the health workers present in the health facilities, the most experienced maternal and child health provider was interviewed. According to the survey result, one of them had received training on IPT use, two on breastfeeding promotion and three on nutrition (Table 6.10). None of the health workers had received training on other child health and maternal health aspects such as immunization, pneumonia, diarrhea and malaria case management, IMCI, newborn care, post partum care, ANC, infection control, emergencies referrals, ACT use and ITN use. The percentage of health facilities in which most experienced provider received child health training in last 12 months is 12.0%. Similarly the percentage of health facilities in which most experienced provider received training in maternal-neonatal care in last 12 months is 4.0%.

Table 6.10: Health facilities with health workers trained on maternal and neonatal care

HW Training & Contents	**No.**	**%**
HW receiving Maternal and Neonatal Care training in last 12 months	7	28.0
On Immunization	0	0.0
On Pneumonia case management	0	0.0
On Diarrhea case management	0	0.0
On Malaria case management	0	0.0
On ACT use	0	0.0
On ITN use	0	0.0
On IPT use	1	4.0
On Nutrition	3	12.0
On Breastfeeding promotion	2	8.0
On IMCI	0	0.0
Newborn care	0	0.0
Post-partum care	0	0.0
On ANC	0	0.0
On Infection control	0	0.0
On AMTSL	0	0.0
On Obstetric / neonatal emergencies referral	0	0.0
Child Training - % of health facilities in which most experienced provider received child health training in last 12 months		**12.0**
MNC Training - % of health facilities in which most experienced provider received training in maternal/neonatal care in last 12 months		**4.0**

The quality of supervision was poor in all health facilities surveyed. Only seven (28.0%) had received external supervision in the last six months. (Table 6.11) Of those receiving supervision in the past six months three health workers mentioned that the drug supplies were checked during the supervision and one mentioned that the problems were discussed. The other health workers did not cite any examples of activities (delivery of supplies, checking of reports, observing works, feedbacks or technical and managerial updates) undertaken during supervision. The percentage of health facilities which received supervision in last 3 months is 16.0%.

Table 6.11: Health facilities having supervision

Health facilities supervised & checklists observed	**No.**	**%**
Interviewed health workers had external supervision in last 3 months	7	28.0
Delivered supplies	0	0.0
Reports checked	0	0.0
Observed work	0	0.0
Feedback provided	0	0.0
Positive feedback	0	0.0
Technical or managerial updates provided	0	0.0
Problems discussed	1	4.0
Drug supplies checked	3	12.0
% of health facilities which received supervision in last 3 months		**16.0**

C. Performance

The final area of RHFA assessment is outputs of the health services at facility level. These outputs are annual number of cases visiting at the health facility for care and treatment of sick children, antenatal care, delivery, immunization and growth monitoring.

The number of cases seen at the 25 health facilities in the year preceding the survey is given in Table 6.12. The number of children seen for growth monitoring purpose is the highest (1662 on average) followed by those visiting for immunization purpose (1338 on average), care of the sick children (570 on average), for ANC (256 on average) and for delivery (62 on average).

Table 6.12: Annual number of cases seen by the health facilities

Annual number of cases in health facility	**Number**	**Average**
Clinical encounters for sick children	14,256	570.2
ANC visits	6,404	256.2
Deliveries	1,560	62.4
Immunization visits	34,540	1,381.6
Growth monitoring	41,552	1,662.1

The number of cases observed or children brought to health facilities for care and treatment of various health problems are presented in Table 6.13. Six cases meeting the inclusion criteria coming at the health facilities were observed in each of the 25 health facilities. If the cases were not sufficient on the day of the visit, the follow up visits were made on the subsequent days. A total of 150 cases were observed; six cases per health facility. The average number of cases observed was 5.3 for ARI, 1.2 for fever/ malaria and 1.1 for diarrhea. The survey team observed whether all five assessment tasks were carried out or not during the care and treatment of the clients. The percentage of assessment tasks done on average per health facility is 11.0%.

Table 6.13: Health facilities with number of cases observed

Cases observed in health facility	**Number**	**Average**
Total number of cases observed	150	6.0
Number of cases of ARI observed	133	5.3
Number of cases of fever / malaria observed	31	1.2
Number of cases of diarrhea observed	28	1.1
% assessment tasks done on average per health facility		**11%**

The number of cases seen and treated at health facilities in the last three months was observed during the survey using the performance indicators. The results are given in Table 6.14. Of seven malaria or fever cases seen in the last three months, all were given antimalarial drugs. There were a total of 1,489 cases of ARI in the last three must seen in 25 health facilities; an average of 59.6 cases per health facility. Of those cases that visited the health facilities, more than 90.0% were treated by first line antibiotics. Likewise, the number of non-bloody diarrhea cases seen at the health facility was 689 of which 69.8% of the cases were given ORS but no antibiotics. The total number of cases seen in last three months for fever, ARI and diarrhea was 2,185 of which 1,836 (84.0%) were treated by following treatment protocol.

Table 6.14: Health facilities with number of cases seen and treated

Number of sick children treated in health facility	**Number**	**Average**	**%**
Number malaria/fever cases seen in last 3 months	7	0.3	
% of malaria/fever cases treated with first line anti-malarial drugs	7		100.0
Number of ARI cases seen in last 3 months	1,489	59.6	
% of ARI cases treated with first line antibiotic	1,348		90.5
Number of non-bloody diarrhea cases seen in last 3 months	689	27.6	
% of non-bloody diarrhea cases given ORS but no antibiotic	481		69.8
Total number of fever, ARI, and simple diarrhea cases seen in last 3 months	2,185	-	
Total number of fever, ARI, and simple diarrhea cases treated by protocol in last 3 months	1,836		
% of sick children treated by protocol	**-**	**-**	**84.0%**

C.1. Exit Interview

Interviews were made with the care taker of the sick child. The results are presented in Table 6.15. A total of 150 caretakers were interviewed. The number of ARI cases identified by the caretaker was 99. Similarly the cases identified for fever/ malaria and simple diarrhea were 11 and 24 respectively. Thirty two caretakers (21.3%) did not know the results of the diagnosis. Seventy percent of the cases had at least one drug prescribed for their clients.

Table 6.15: Results of interviews with the caretaker of the sick child

Exit interviews	**Number**
Number of caretakers interviewed	150
Number of ARI cases identified by caretaker	99
Number of malaria/fever cases identified by caretaker	11
Number of diarrhea cases identified by caretaker	24
Number of caretakers who did not know diagnosis	32
Number of cases for which at least one drug prescribed	105

Chapter VII: Discussion

This chapter deals with the discussion on the results of the LQAS survey and RHFA survey.

A. LQAS Survey

Module 1: Mothers with 0-5 months child

Antenatal Care

Antenatal care is associated with a better overall pregnancy outcome for both mothers and infants. Antenatal care can help in the prevention of factors associated with newborn mortalities such as Low Birth Weight and Tetanus during pregnancy.

ANC Visit

Almost 44.0% of Nepalese mothers receive ANC from a SBA for their most recent births. Antenatal care by an SBA is twice as high in urban areas (85.0%) than in rural areas (38.0%). (NDHS, 2006) The results of Baseline Survey showed also that considerable percentages of mothers had sought for antenatal care during the delivery of their youngest child. It was 82.2% in Parsa and 87.4% in Sunsari. But mothers who had undergone 4 times ANC visits or check up by health workers upto ANM level were low, 24.7% in Parsa and 29.1% in Sunsari. Mothers who had at least two doses of Tetanus toxoid were significantly high, 88.7% in Parsa and 83.5% in Sunsari.

Micronutrients

Vitamin A is one of the micronutrients given to mothers. Percentages of mothers (28.0% in Parsa and 10.3% in Sunsari) who were suffering from night blindness during pregnancy and were receiving Vitamin A (25,000 iu) were low.

Deworming

Mothers were given albendazole (400mg) tablets for deworming. It was given to mothers by three months of their last pregnancy; they were only 37.7% in Parsa but higher 62.8% in Sunsari.

Knowledge of danger signs during pregnancy

Only about half of the mothers' had knowledge on at least two danger signs during pregnancy (51.0% in Parsa and 46.7% in Sunsari). Knowledge on danger signs can save lives, the remaining half of the mothers does not know on the danger signs during pregnancy.

Delivery Care

Majority of births in Nepal (81.0%) is delivered at home. Likewise, significant number of babies is delivered at home in the two study districts, too (67.6% in Parsa and 61.0% in Sunsari). But at the same time, those who have opted for institutional delivery, most of the deliveries are seen to be taking place in hospitals than PHCCs, HPs or SHPs. Deliveries in hospitals were 23.9% in Parsa and 33.3% in Sunsari. The national value for delivery at a health facility is 18%. In the study districts, delivery by skilled birth attendants was 12.6% both in Parsa and Sunsari districts. Most of the deliveries being attended by family members, trained or untrained TBAs. The NDHS, 2006 reports that 19.0% of births were delivered by SBA, 19.0% by TBAs and 50.0% by a relative or other person.

Knowledge of danger signs during delivery
Few mothers had knowledge of at least two danger signs during delivery (27.1% in Parsa and 17.2% in Sunsari). The rest of them did not have knowledge on danger signs.

Post natal Care
Only less than half of the mothers had PNC check up, 31.2% in Parsa and 44.2% in Sunsari but rest of them did not go for any PNC checkup. Among those who had PNC checkup, most of them had checkup within 24 hours after delivery. In Nepal, 31.0% of mothers received postnatal care within 2 days of birth. (NDHS, 2006)

Knowledge of danger signs during pregnancy
The knowledge of at least two danger signs and symptoms after delivery were low, 27.5% for Parsa and 20.4% for Sunsari.

Newborn Care
Nepal's neonatal mortality is the third highest in the world though such deaths are due to preventable conditions.

Breast feeding and Colostrums feeding
Though breastfeeding is done by almost all of the mothers but the time of initiating breastfeeding is different. Though newborns were ready to feed within 15 to 55 minutes of birth. Only 17.4% mothers in Parsa and slightly higher 33.0% mothers in Sunsari initiated breastfeeding immediately or within 1 hour after birth. In Parsa significantly low percentage of mothers (47.8%) reported breastfeeding after eight hours while less percentage of mothers (26.3%) reported the same.

The practice of feeding colostrums is significantly high in both the districts (84.6% both in Parsa and in Sunsari). But the practice of throwing away colostrums is still seen (14.6% in Parsa and 14.4% in Sunsari).

Immediate Care of Newborn
As part of the newborn care the time a newborn was given a bath was asked. It was found that more than half of the newborns were bathed after 24 hours (56.7% in Parsa and 49.5% in Sunsari) but significant percentage of newborn were bathed within 24 hours (38.0% in Parsa and 48.8% in Sunsari).

PSBI among neonates
The percentage of neonates with possible severe bacterial infections that was diagnosed by a health worker or FCHV within 48 hours of onset was 36.4% in Parsa and 69.2% in Sunsari. There were no neonates who received a first dose of oral antibiotics within 48 hours of onset in Parsa while there were 30.4% in Sunsari. This difference in result may be due to MINI field trial taking place in Morang, a district neighboring Sunsari.

Use of Chlorhexidine
Use of Chlorhexidine for application on the umbilical stumps in both the districts and their knowledge on its use was also lacking among the mothers.

Knowledge of danger signs and symptoms in neonates requiring treatment
The percentages of mothers who had knowledge on at least two danger signs and symptoms in neonates requiring treatment were 75.7% in Parsa but low in Sunsari, only 62.8%.

Module II: Maternal and newborn care, Mothers with child 0-23 months

Antenatal Care
The percentage of mothers receiving at least two doses Tetanus toxoid were significantly high, 95.1% in Parsa and 89.8% in Sunsari.

Delivery care
The percentages of mothers who were attended by skilled birth attendants (doctor, nurse/midwife or other health workers) during delivery were low in Parsa, 36.4% and slightly higher 47.4% in Sunsari. But TBAs, CHWs, family members, friends and relatives attending delivery were more than half (63.6% in Parsa and 52.6% in Sunsari).

Postnatal care
The percentages of children who were checked by appropriately trained health workers during mother's postnatal visit within three days after birth were 27.9% in Parsa and 43.2% in Sunsari while the rest of the children did not receive any checkup.

Breast/infant feeding
The national figure for breastfeeding shows that only about of the babies under 6 months (53.0%) are exclusively breastfed. However, most of the children in Parsa (80.7%) were exclusively breastfed within 24 hours while only 67.7% mothers did so in Sunsari. About 32.5% mothers in Parsa and 69.6% mothers in Sunsari followed appropriate feeding practice for babies. Nearly three-fifth of Nepalese babies are fed according to three recommended infant and child feeding practice for 6-23 months old (NDHS, 2006)

Immunization
The percentages of children aged 12-23 moths who were immunized against measles based on vaccination cards or mothers' recall were 77.6% in Parsa and 85.9% in Sunsari. The percentages of children aged 12-23 months who were immunized against measles based on vaccination cards only were 10.3% in Parsa and 21.7% in Sunsari.

The access to immunization services measured by the percentages of children 12-23 months who had received DPT1 based on vaccination card or mothers' recall were comparable in both the districts 87.9% in Parsa and 94.6% in Sunsari. The percentages of children 12-23 months who had received DPT1 based on vaccination card only were low, 18.7% in Parsa and 31.5% in Sunsari.

The health system performance for immunization services measured by the percentages of children aged 12-23 months who received DPT3 based on vaccination card or mothers' recall were 80.4% in Parsa and 88.0% in Sunsari. The percentages of children aged 12-23 months who received DPT3 based on vaccination card only were low, 15.9% in Parsa and 30.4% in Sunsari.

The drop out rate between the first and third doses of DPT are 7.5% for Parsa and 6.6% for Sunsari (cards seen or mothers' recall) and 2.8% for Parsa and 1.1% for Sunsari (card coverage only). This is remarkably good.

The percentages of children who received Vitamin A supplement in the last 6 months based on card or mothers' recall were 70.7% in Parsa and 87.3% in Sunsari.

Management of diarrhea

One in eight children under five suffered from diarrhea, reported in the NDHS survey. The percentage of children who had diarrhea in the last two weeks recorded in the survey areas is low (13.8% in Parsa and 20.0% in Sunsari). The rest of them did not have diarrhea. Children should receive receive more fluids than usual during diarrheal illness. In Nepal only 22.0% received more liquids than normal, 41.0% were treated with some kind of ORT, 29.0% were treated with ORS packets and 22.0% were given increased fluids. Only few (29.4% in Parsa and 47.4% in Sunsari) received oral rehydration solution and/or recommended home fluids.

Management of ARI

ARI is one of the leading causes of childhood morbidity and mortality throughout the world. Five percent of children under age five had symptoms of ARI (cough and short, rapid breathing) in Nepal of which 43.0% were taken to a health facility or provider. (NDHS, 2006) Children with illness like cough that comes from the chest were about 36.0% in Parsa and 43.7% in Sunsari and with breathing problem, with short, fast breath were 47.2% in Parsa and 53.2% in Sunsari. In such cases, quite a significant number of mothers were seeking health advice.

Malaria and its prevention

Malaria is prevalent after the end of the rainy season particularly in the terai and inner terai and basins of the hilly region of Nepal. Seventeen percent of Nepalese children under five were reported to have had fever in the two weeks preceding the survey. (NDHS, 2006) The percentages of children suffering from fever were 21.5% in Parsa and 31.6% in Sunsari. The percentage of children aged 0-23 months with a febrile episode during the last two weeks who were treated with an effective anti-malarial drug within 24 hours after the fever began were 43.4% in Parsa and 36.7% in Sunsari. The use of insecticide treated mosquito net (ITN) was not found in both districts.

Drinking water and handwashing behavior

Water can be a source of many diseases. Ninety percent of urban households and 80.0% of rural households have access to improved source of drinking water in Nepal. The percentages of households that have treated water effectively in the survey areas were very low (only 7.0% in Parsa and nearly 38.0% in Sunsari), most of them are still not treating water effectively for drinking. The appropriate handwashing practice in households with soap or detergent at the place for handwashing was slightly over fifty percent (57.5%) in Parsa and most of them in Sunsari (72.3%).

B. Rural Health Facility Assessment (RHFA) Survey

Twenty-five health facilities below the district level (1 PHCC, 3HPs & 22 SHPs) were assessed by the survey team.

Staffing
Staffing was often deficient in terms of post being filled though the posts are sanctioned. The adequate number of staff with right skill and attitude are the key to success to health programs.

Infrastructures, equipment and supplies
Only 32.0% of the health facilities have latrine, water, electricity or privacy facilities. Health facilities are generally ill equipped lacking even the basic and inexpensive equipment like jug, spoon and cups for diarrhea case management and ARI timers for diagnosis of pneumonia.

Availability of Drugs and Vaccines
None of the health facilities surveyed had all essential neonatal and delivery drugs. Antibiotics for newborn sepsis and pneumonia were not available at any of the health facility surveyed. Niveripine a drug used in case of HIV/AIDS infection was not available. Oxytocin was available in only one health facility. None of the health facilities have ITNs. There was no stock out drugs for the last six months. The percentage of essential ANC drugs available per health facility was 11.0%. Of the total health facilities surveyed 68.0% of the health facilities had all the vaccines. The percentage of vaccines available per health facility was 74.9%.

Training and Supervision
Training of health workers on IMCI or maternal or neonatal health are virtually non existent. Supervision by the district to all the peripheral health facilities was poor, only 28.0% received external supervision in the last six months.

Availability of Guidelines and HMIS
The availability of nationally mandated guidelines for care of children, ANC and delivery services were not available at any of the facilities. The clinical guidelines and protocol developed and printed by the government for use at the health facility were not available; this is a bitter truth, which should not have been a problem. It's lacking was only due to the fact that the health workers were not able to realize the need and benefits of its use. Some health facilities do not have separate register for sick children, ANC and delivery services. Poor quality of registers is attributable to lack of motivation, training and orientation on its importance and use of data to be generated from these registers.

Utilization of health services
The average number of children seen for growth monitoring purpose in a year by a health facility was 1,662. The average number of children immunized in a health facility per year was 1,338.

APPENDIX 6.1 LQAS Indicators by District with Confidence Intervals

Comparison of coverage proportion for key indicators collected between first-time (first LQAS on Jan-Feb 2008)

i. Sunsari DHO & Parsa DPHO and Plan Nepal
0-5 months: Indicators with baseline data of Parsa and Sunsari districts, Jan-Feb 2008

		Parsa District		Sunsari District	
S	Indicator	Baseline (Feb'08)	Confidence Interval ± CI	Baseline (Jan'08)	Confidence Interval ± CI
A	% of mother with children age 0-23 months who child birth below 19 years age	17.4%	4.73	9.8%	3.46
B	% of mother with children age 0-23 months who child birth between 20 and 34 years age	78.9%	5.08	86.3%	3.99
C	% of mother with children age 0-23 months who child birth above 35 years age	3.6%	2.34	3.9%	2.24
D	% of illiterate mother	27.5%	5.57	51.9%	5.80
E	% of mother education is informal education	2.0%	1.76	4.9%	2.51
F	% of mother education is Primary Level (1-5 class)	9.7%	3.69	11.6%	3.71
G	% of mother education is Secondary level (6-10 class)	13.8%	4.30	26.0%	5.09
H	% of mother education is Higher Secondary (10+2 class)	0.8%	1.12	4.9%	2.51
I	% of mother education is University Degree	1.2%	1.37	0.7%	0.97
J	% of mother occupation is Agriculture	16.2%	4.59	15.8%	4.23
K	% of mother occupation is Service	1.6%	1.57	1.4%	1.37
L	% of mother occupation is Business	2.0%	1.76	3.9%	2.24
M	% of mother occupation is Labor	4.0%	2.46	10.5%	3.56
N	% of mother occupation is Housewife	76.1%	5.32	68.1%	5.41
O	% of mother occupation is Others			0.4%	0.69
P	% of male child birth	48.6%	6.23	56.8%	5.75
Q	% of female child birth	51.4%	6.23	43.2%	5.75
	Percentage of mothers protected against tetanus by getting second dose of TT vaccine.	89.1%	3.89	82.1%	4.45
	Percentage of mothers of children aged 0-5 months with 4 times anti-natal visit (upto ANM)	25.5%	5.44	29.1%	5.27
2a	Percentage of mothers of children aged 0-5 months with 6 times anti-natal visit (upto ANM)	7.3%	3.24	7.4%	3.03
2b	Percentage of mothers of children aged 0-5 months with 4 times anti-natal visit (upto MCHW)	29.6%	5.69	43.5%	5.76
2c	Percentage of mothers of children aged 0-5 months with 6 times anti-natal visit (upto	8.1%	3.40	11.6%	3.71

		Parsa District		Sunsari District	
S	Indicator	Baseline (Feb'08)	Confidence Interval ± CI	Baseline (Jan'08)	Confidence Interval ± CI
	MCHW)				
	Percent of mothers of children aged 0-5 months having a birth preparedness plan already coordinated with their closest skilled childbirth provider during their pregnancy.	9.7%	3.69	26.0%	5.09
	Percent of mothers of children aged 0-5 months receiving iron folate tablets/caps during their pregnancy. (At least 4 months)	44.9%	6.20	60.4%	5.68
4a	Percent of mothers of children aged 0-5 months receiving iron folate tablets/caps during their pregnancy. (At least 6 months)	30.0%	5.71	48.8%	5.80
	Percent of mothers of children aged 0-5 months suffering from night blindness during her pregnancy and receiving low-dose vitamin A (25,000 iu).	25.0%	12.79	17.4%	15.49
	Percent of mothers of children aged 0-5 months receiving a single dose of albendazole (400 mg) after completion of three month of last pregnancy.	37.2%	6.03	64.2%	5.57
	Percent of mothers of children aged 0-5 months whose birth was attended by a skilled provider (doctor or nurse/midwife). (ANM)	30.0%	5.71	42.5%	5.74
7a	Percent of mothers of children aged 0-5 months whose birth was attended by a skilled provider (doctor or nurse/midwife). (MCHW)	35.2%	5.96	46.0%	5.79
	Percent of newborns who breast-fed within one hour of birth.	17.8%	4.77	34.4%	5.51
	Percent of newborns immediately after birth, who were dried off, exposed to a heating source (including kangaroo care) and avoided bathing for 24 hours.	38.5%	6.07	33.0%	5.46
	Percent of birth delivery providers who washed their hands with soap before assisting in the procedure.	76.1%	5.32	74.4%	5.07
	Percent of mothers of children aged 0-5 months who know at least two danger signs during pregnancy.	55.5%	6.20	51.6%	5.80
11	Percent of mothers of children aged 0-5 months who know at least two danger signs during delivery.	27.5%	5.57	21.1%	4.73
11	Percent of mothers of children aged 0-5 months who know at least two danger signs after delivery.	26.7%	5.52		4.79
11	Percent of mothers of children aged 0-5 months	77.3%	5.22	21.8%	5.60

		Parsa District		Sunsari District	
S	Indicator	Baseline (Feb'08)	Confidence Interval ± CI	Baseline (Jan'08)	Confidence Interval ± CI
	who know at least two danger signs among newborns.				
	Percent of mothers with children aged 0-5 months whose newborn children with signs of severe illness were seen by a qualified public or private provider.	92.7%	3.24	88.4%	3.71
	Percent of new mothers with children aged 0-5 months (and their newborns) who received a first checkup by a skilled provider within the first TWO days of birth. (upto ANM)	17.4%	4.73	33.0%	5.46
13	Percent of new mothers with children aged 0-5 months (and their newborns) who received a first checkup by a skilled provider within the first TWO days of birth. (upto MCHW)	18.2%	4.81	34.0%	5.50
	Percent of new mothers with children aged 0-5 months (and their newborns) who received a second post-natal checkup by a skilled provider 3-7 days after birth. (up to ANM)	2.8%	2.07	0.7%	0.97
14	Percent of new mothers with children aged 0-5 months (and their newborns) who received a second post-natal checkup by a skilled provider 3-7 days after birth. (upto MCHW)	2.8%	2.07	0.7%	0.97
	Percent of mothers of children aged 0-5 months who received vitamin A (200,000 iu) within 45 days of their birth.	47.8%	6.23	61.4%	5.65
	Percent of neonates with possible severe bacterial infections (PSBI) diagnosed by FCHV or MOHP worker within 48 hours of onset.	33.3%	30.80	63.0%	13.95
	Percent of neonates with PSBI given a first dose of oral antibiotics within 48 hours of onset.	0.0%		30.4%	13.30
17	Percent of neonates with PSBI given a first dose of oral antibiotics within 48 hours of onset for 3 days	0.0%		6.5%	7.14
17	Percent of neonates with PSBI given a first dose of oral antibiotics within 48 hours of onset for 3 to 5 days	0.0%		23.9%	12.33
	Percent of neonates with PSBI referred to a health worker for parenteral antibiotics within 48 hours of onset.	0.0%		2.2%	4.21
	Percent of neonates treated with antibiotics due to PSBI who completed the course of antibiotics.	0.0%		0.0%	
	Percentage of pregnant women who knew how to apply chlorhexidine on the umbilical stump.	0.4%	0.79	0.0%	

		Parsa District		Sunsari District	
S	Indicator	Baseline (Feb'08)	Confidence Interval ± CI	Baseline (Jan'08)	Confidence Interval ± CI
	Percentage of newborns whose umbilical stump was first applied with chlorhexidine 4% within 24 hours of birth.	0.4%	0.79	0.0%	
	Percent of children aged 0-5 months who received low dose vitamin "A" (50,000 iu) within 48 hours of their birth.	0.0%		1.1%	1.18
	Percent of children aged 0-5 months who feed colostrums to child	85.8%	4.35	85.3%	4.12
	Percent of children aged 0-5 months know at least 1 counseled during antenatal check-up	70.0%	5.71	74.0%	5.09
	Percent of children aged 0-5 months know at least 3 counseled during antenatal check-up	17.8%	4.77	36.8%	5.60

ii. Sunsari DHO & Parsa DPHO and Plan Nepal

Under 0-23 months: Indicators with baseline data of Parsa and Sunsari districts, Jan-Feb 2008

		Parsa District		Sunsari District	
S	Indicator	Baseline (Feb'08)	Confidence Interval ± CI	Baseline (Jan'08)	Confidence Interval ± CI
A	% of mother with children age 0-23 months who child birth below 19 years age	15.4%	4.50	8.1%	3.16
B	% of mother with children age 0-23 months who child birth between 20 and 34 years age	80.2%	4.97	87.4%	3.86
C	% of mother with children age 0-23 months who child birth above 35 years age	4.5%	2.57	4.6%	2.42
D	% of literate mother	26.7%	5.52	48.8%	5.80
E	% of mother education is informal education	4.9%	2.68	12.9%	2.82
F	% of mother education is Primary Level (1-5 class)	10.9%	3.89	26.6%	3.90
G	% of mother education is Secondary (6-10 class)	9.3%	3.62	44.6%	4.79
H	% of mother education is Higher Secondary (10+2 class)	0.8%	1.12	12.9%	2.82
I	% of mother education is University Degree	0.8%	1.12	2.9%	1.37
J	% of mother occupation is Agriculture	14.2%	4.35	19.3%	4.58
K	% of mother occupation is Service	1.6%	1.57	1.1%	1.18
L	% of mother occupation is Business	1.2%	1.37	3.9%	2.24
M	% of mother occupation is Labor	4.5%	2.57	11.9%	3.76
N	% of mother occupation is Housewife	78.5%	5.12	63.9%	5.58
O	% of male child birth	51.4%	6.23	56.5%	5.76
P	% of female child birth	48.6%	6.23	43.5%	5.76
Q	% of child age less than equal 5 months	35.6%	5.97	44.2%	5.77
R	% of child age between 6 and 23 months	64.4%	5.97	55.8%	5.77
S	% of child age between 11 and 23 months	43.3%	6.18	33.0%	5.46
1	Tetanus Toxoid: % of mothers with children age 0-23 months who received at least 2 tetanus toxoid vaccinations before the birth of their youngest child	93.5%	3.07	77.9%	4.82
2	Skilled Delivery Assistance: % of children age 0-23 months whose births were attended by skilled personnel	37.2%	6.03	49.1%	5.80
3	Post-Natal Visit to Check on the Newborn: % of children age 0-23 months who received a post-natal visit from an appropriate trained health worker within three days after birth	25.9%	5.46	40.7%	5.70
4	Exclusive Breastfeeding **: % of children age 0-5 months who were exclusively breastfed during the last 24 hours	85.2%	7.41	75.4%	7.52
5	Infant and Young Child Feeding: Percent of children age 6-23 months fed according to a minimum of appropriate feeding practices	32.1%	7.26	69.2%	7.18
6	Vitamin A Supplementation: % of children age 6-	72.3%	6.95	69.2%	7.18

		Parsa District		Sunsari District	
S	Indicator	Baseline (Feb'08)	Confidence Interval ± CI	Baseline (Jan'08)	Confidence Interval ± CI
	23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall				
7	Measles Vaccination: % of children aged 12-23 months who received measles vaccine according to the vaccination card or mother's recall by the time of the survey	54.2%	9.44	71.0%	9.23
7a	Measles Vaccination: % of children aged 12-23 months who received measles vaccine according to the vaccination card by the time of the survey (Card coverage)	10.3%	5.75	25.8%	8.89
8	Access to Immunization Services: % of children aged 12-23 months who received DTP1 according to the vaccination card or mother's recall by the time of the survey	81.3%	7.39	80.6%	8.03
8a	Access to Immunization Services: % of children aged 12-23 months who received DTP1 according to the vaccination card by the time of the survey (Card Coverage)	21.5%	7.78	39.8%	9.95
9	Health Systems Performance Regarding Immunization Services: % of children aged 12-23 months who received DTP3 according to the vaccination card or mother's recall by the time of the survey	70.1%	8.68	75.3%	8.77
9a	Health Systems Performance Regarding Immunization Services: % of children aged 12-23 months who received DTP3 according to the vaccination card by the time of the survey (Card Coverage)	17.8%	7.24	38.7%	9.90
10	Treatment of Fever in Malarious Zones: % of children age 0-23 months with a febrile episode during the last two weeks who were treated with an effective anti-malarial drug within 24 hours after the fever began	7.7%	7.24	5.3%	5.09
11	ORT Use: % of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution and/or recommended home fluids	32.4%	15.73	36.2%	12.37
12	Appropriate Care Seeking for Pneumonia: % of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider	37.5%	10.12	78.3%	9.73

		Parsa District		Sunsari District	
S	Indicator	Baseline (Feb'08)	Confidence Interval ± CI	Baseline (Jan'08)	Confidence Interval ± CI
13	Point of Use: % of households of children age 0-23 months that treat water effectively	6.9%	3.16	37.9%	5.09
14	Appropriate Hand Washing Practices: % of mothers of children age 0-23 months who live in households with soap at the place for hand washing	58.3%	6.15	63.2%	5.60
15	ITN Use: % of children age 0-23 months who slept under insecticide-treated bednet the previous night			0.0%	
16	Underweight: % of children age 0-23 months who are underweight (-SD for the median weight for age, according to WHO/NCHS reference population)	11.7%	4.01	11.2%	3.67

APPENDIX 6.2: Schedule of Master ToT Program on LQAS and RHFA

Master TOT on Lot Quality Assurance Sample (LQAS)
January 4-8, 2008, Institute of Medicine (IOM), Kathmandu

Tentative schedule
Day One

Time	Topic	Responsible
10:00 – 10:15	Registration in book	
10:15 – 11:00	Opening remarks from CHD, IOM and Plan	
11:00 – 11:15	Introduction	All
11:15 – 11:30	Tea Break	All
11:30 – 11:45	Administrative and logistic arrangement	IOM
11:45 – 12:00	Expectation collection	Participants
12:00 – 12:45	Introduction of LQAS basic principles	
12:45 – 13:45	Lunch	All
13:45 – 14:30	Introduction of LQAS basic principles cont…	
14:30 – 15:15	Data collection method on LQAS	
15:15 – 15:30	Tea Break	All
15:30 – 16:00	Data collection method on LQAS cont…	

Day Two

Time	Topic	Responsible
10:00 – 10:30	Review of first day	Participants
10:30 – 11:15	Supervision area & tabulation of Data when using the LQAS	
11:15 – 11:30	Tea Break	All
11:30 – 12:45	Calculating results for making informed decisions	
12:45 – 13:45	Lunch	All
13:45 – 15:15	Using LQAS for monitoring	
15:15 – 15:30	Tea break	All
15:30 – 16:00	LQAS vs cluster sampling	

Day Three

Time	Topic	Responsible
10:00 – 10:30	Review of Second day	Participants
10:30 – 11:15	Questionnaire Review in group	All
11:15 – 11:30	Tea Break	All
11:30 – 11:45	Group Division for role play	Participants
11:45 – 12:45	Role Play in group	Participants
12:45 – 13:45	Lunch	All
13:45 – 15:15	Role Play in group	Participants
15:15 – 15:30	Tea break	All
15:30 – 16:00	Preparation for field pre-test	All

Day Four

Time	Topic	Responsible
10:00 – 10:30	Review of Third day	Participants
10:30 – 11:00	Preparation for field pre-test	All
11:00 – 11:15	Tea Break	All
11:15 -	Departure to field for data collection (Pre-test)	All

Day Five

Time	Topic	Responsible
10:00 – 10:30	Review of Fourth day	Participants
10:30 – 11:15	Share and discuss about field data collection (Problem and confusion)	Participants
11:15 – 11:30	Tea Break	All
11:30 – 13:00	Share and discuss about field data collection (Problem and confusion) cont…	Participants
13:00 – 14:00	Lunch	All
14:00 – 15:00	Closing remarks from CHD, IOM and Plan	All

Rapid Health Facility Assessment (R - HFA)
Schedule for Surveyor Training (14 – 17 February, 2008)

Day	Activities
One 14 Feb	**08:00 – 09:00 Breakfast** **09:00 – 12:30 Opening & General Information** Opening • Introduction of the participants • Administrative information General information • Purpose of the survey • Training objectives • Survey protocol and techniques • Introduction of Participant Guidelines • Clarification of participant expectations or concerns **12:30 – 13:30 Lunch** **13:30 – 17:00 Intro to first 2 formats – Clinical Observation & Sick Child** Clinical Observation – Sick Child • Review the instrument • Role play Caretaker Exit Interview – Sick Child • Review the instrument • Role play
Two 15 Feb	**08:00 – 09:00 Breakfast** **09:00 – 12:30 Health facility visit for Clinical Observation and Caretaker Exit Interview** • Visit to health facility for practice of Clinical Observations and Exit Interviews • Debriefing of the health facility visit **12:30 – 13:30 Lunch** **13:30 – 17:00 Intro to Health Worker Interview and HF Checklist** Health Worker Interview • Review the instrument • Role play Health Facility Checklist • Review the instrument • Role play

Day	Activities
Three 16 Feb	**08:00 – 09:00** **Breakfast** **09:00 – 12:30** **HW Interview and HF Checklist** • To practice the HW interview and using the HF Checklist • Debriefing of HW interview **12:30 – 13:30** **Lunch** **13:30 – 17:00** **Sampling HF and Data Analysis** Sampling HF in districts. • Explanation of how HF were sampled in each district • Reviewing list of HF sampled and to be visited during the assessment Analysis of R-HFA data • Analysis of data at the HF level. Identifying strengths and areas of needed improvement • Analysis of data at the district level. Identifying areas of needed improvement
Four 17 Feb	**08:00 – 09:00** **Breakfast** **09:00 – 12:30** **Continuation of Data Analysis** **12:30 – 13:30** **Lunch** **13:30 – 17:00** **Wrap-up** • Review any particular difficulties in application of the forms • Team identification for field survey • Developing the itinerary and travel schedule • Review role of supervisor • Final comments and questions • Evaluation of training

APPENDIX 6.3: Lists of Participants

i. Master TOT on LQAS in Kathmandu
4 to 8 Jan 2008

SN	Name	Organization	Govern/Partner
1	Prakash Adhikari	District Health Office, Sunsari	Government
2	Ram Dhan Mehta	District Health Office, Sunsari	Government
3	Prem Chandra Jaiswal	District Health Office, Parsa	Government
4	Ram Charitra Mehta	District Health Office, Sunsari	Government
5	Shib Narayan Yadav	District Health Office, Sunsari	Government
6	Sudhira Acharya	Family Health Division	Government
7	Shree Krishna Paudel	HMIS, Mgmt Division	Government
8	Jagadish Parajuli	Central Regional Health Directorate, Hetauda	Government
9	Dr Bandana Pradhan	Institute of Medicine	IOM
10	Gita Bhandari	Institute of Medicine	IOM
11	Shiva Prasad Sapkota	Institute of Medicine	IOM
12	Hira Bahadur Maharjan	Institute of Medicine	IOM
13	Ramesh Sigdel	Institute of Medicine	IOM
14	Punyashori Suwal	Institute of Medicine	IOM
15	Ramjee Prasad Pathak	Institute of Medicine	IOM
16	Sushma Tiwari (Dwivedy)	TRMC	NGO
17	Kalawati Changbang	Plan Nepal, Sunsari PU	Plan Nepal
18	Diwakar Mishra	Plan Nepal, LIBON Bara	Plan Nepal
19	Sudarshan Paudel	Plan Nepal, Makwanpur PU	Plan Nepal
20	Krishna Bahadur Achhami	Plan Nepal, LIBON Parsa	Plan Nepal
21	Deo Ratna Chaudhary	Plan Nepal, LIBON Bara/Parsa	Plan Nepal
22	Shusil Joshi	Plan Nepal	Plan Nepal
23	Sher Bahadur Rana	Plan Nepal	Plan Nepal
24	Bhagawan Das Shrestha	Plan Nepal	Plan Nepal
25	Dipak Dahal	Plan Nepal	Plan Nepal

ii. Sunsari District
LQAS Training, data collection, tabulation and analysis
January 11-31, 2008

SN	Name	Organization	Govern/Partner
1	Gyan Kala Raut	Chatra Ilaka	Government
2	Bijaya Guragain	DHO Sunsari	Government
3	Dr. D S L Karna	Eastern Regional Health Division	Government
4	Dr. G S Jha	DHO Sunsari	Government
5	Dr. I N Das	DHO Sunsari	Government
6	Hari Deo Thakur	Baklauri Ilaka	Government
7	Indra Mani Pokharel	Dharan SHP	Government
8	Kameshwor Jha	DHO Sunsari	Government
9	Khadga S. Chauhan	Bhutaha Ilaka	Government
10	Madan Mohan Jha	Inaruwa Ilaka	Government
11	Madav Lal Dev	Madhuwan PHC	Government
12	Nara Bdr. Shrestha	Prakashpur Ilaka	Government
13	Prakash Adhikari	DHO Sunsari	Government
14	Ram Babu Shrestha	Sitagunj Ilaka	Government
15	Ram Charan Chaudhary	Itahari PHC	Government
16	Ram Dhan Mehta	DHO Sunsari	Government
17	Ramcharitra Mehata	DHO Sunsari	Government
18	Rameshwor Sah	Dewagunj Ilaka	Government
19	Rewa Tuladhar	Women Organization	Government
20	Shamim Ansari	Harinagara Ilaka	Government
21	Shivan Thakur	DHO Sunsari	Government
22	Sitaram Gupta	Madheli Ilaka	Government
23	Sonelal Yadav	Satterjhora Ilaka	Government
24	Suman Tiwari	DHO Sunsari	Government
25	Puneswori Suwal	Student - Institute of Medicine	IOM
26	Sanjay K Das	Student - Institute of Medicine	IOM
27	Ramesh Sigdel	Institute of Medicine	IOM
28	Dr. Bandana Pradhan	Institute of Medicine	IOM
29	Gita Bhandari	Institute of Medicine	IOM
30	Ramjee Pathak	Institute of Medicine	IOM
31	Pramila Thapa	RCSD sunsari	NGO
32	Sita K. Sah	RYC Sunsari	NGO
33	Praveen Karn Kayastha	Local CBO	CBO
34	Ranjita Chaudhary	Social health club	CBO
35	Sharada Shrestha	CBO Sunsari	CBO
36	Bhagawan Das Shrestha	Plan Nepal	Plan Nepal
37	Bijay K Sah	Plan Nepal	Plan Nepal
38	Deoratna Chaudhary	Plan Nepal	Plan Nepal
39	Dipak Dahal	Plan Nepal	Plan Nepal
40	Diwakar Mishra	Plan Nepal	Plan Nepal
41	Hari Dev Sah	Plan Nepal	Plan Nepal
42	Jaymangal Thakur	Plan Nepal	Plan Nepal
43	Kalawati Changbang	Plan Nepal	Plan Nepal
44	KB Achhami	Plan Nepal	Plan Nepal

45	Mahendra Shahi	Plan Nepal	Plan Nepal
46	Rajendra Pd. Sah	Plan Nepal	Plan Nepal
47	Y. B. Thapa	Plan Nepal	Plan Nepal
48	Yogendra Giri	Plan Nepal	Plan Nepal

iii. Parsa District

LQAS Training, data collection, tabulation and analysis
5 to 23 February 2008

SN	Name	Organization	Govern/Partner
1	Yogendra Prasad Bhagat	DPHO Parsa	Government
2	Yogendra Panjiyar	Birgunj HP	Government
3	Jay Mangal Prasad Kushwaha	Bagahi PHC	Government
4	Mahamud Ansari	Bhikhampur PHC	Government
5	Devendra Shah	Pokhariya PHC	Government
6	Phulena Prasad Shrivastaw	Sirshiya HP	Government
7	Raghunath Prasad Chaurashiya	Bishrampur HP	Government
8	Damodar Prasad Yadav	Nichuta HP	Government
9	Kameshwar Prasad Chaurasiya	DPHO Parsa	Government
10	Ashok Kumar Raut	Thori HP	Government
11	Achhelal Das	Pakahamainpur HP	Government
12	Chandra Kanta Lal Karn	Bagahi PHC	Government
13	Indra Dev Sah	Satwariya PHC	Government
14	Sumitra Lama	DPHO Parsa	Government
15	Sumita Dhakal	DPHO Parsa	Government
16	Rajendra Prasad Chaurasiya	DPHO Parsa	Government
17	Yugal Kishor Nyaupane	DPHO Parsa	Government
18	Ram Narayan Yadav	DPHO Parsa	Government
19	S N Sungh	DPHO Parsa	Government
20	Dharmraj Bahadur Thapa	Ddc Parsa	Government
21	Sunil Kumar Shrivastav	DPHO Parsa	Government
22	Bhawnath Jha	DPHO Parsa	Government
23	Shashi Kant Singh	Bhikhampur PHC	Government
24	Nageshwar Prasad Sah	DPHO Parsa	Government
25	Islam Miyan	Langadi HP	Government
26	Amaleshwor Mishra	DHO Bara	Government
27	Rajkishor Prasad	Sedhwa HP	Government
28	Yogendra Prasad Chaurasiya	Birgunj HP	Government
29	Premchandra Jaiswal	DPHO Parsa	Government
30	Shyam Sundar Jha	Bageshwari PHC	Government
31	Balkishor Prasad Yadav	Bageshwari PHC	Government
32	Ramesh Sigdel	Institute Of Medicine	IOM
33	Devrita Chaudhary	Abhiyan Bara, Parsa	NGO
34	Ramakant Patel	DYC Parsa	NGO
35	Sabina Adhikari	AYC Parsa	NGO
36	Diwakar Jaiswal	AYC Parsa	NGO
37	Ranjana Chaudhary	HURAS Nepal	NGO

38	Sharmila Budhathoki	HURAS Nepal	NGO
39	Sumitra Timilsina	HURAS Nepal	NGO
40	Premchandra Prasad Jayswal	HURAS Nepal	NGO
41	Praveen Karn Kayastha	Local CBO	CBO
42	Rajeev Banjara	Makalu Health Academy	CBO
43	Jay Mangal Thakur	Plan Nepal	Plan Nepal
44	Sajit Kumar Adhikari	Plan Nepal	Plan Nepal
45	Krishna K Shrestha	Plan Nepal	Plan Nepal
46	Rajkishor Prasad Chaudhary	Plan Nepal	Plan Nepal
47	Deo Ratna Chaudhary	Plan Nepal	Plan Nepal
48	Dipak Dahal	Plan Nepal	Plan Nepal
49	Krishna Bahadur Achhami	Plan Nepal	Plan Nepal
50	Diwakar Mishra	Plan Nepal	Plan Nepal

iv. Training on RHFA Survey
Sunsari District
14 - 22 February 2008

SN	Name	Organization	Govern/Partner
1	Urmila Budhathoki	DHO Sunsari	Government
2	Amol Narayan Choudhary	DHO Sunsari	Government
3	Prem Das	DHO Sunsari	Government
4	Maiya Sanjel	DHO Sunsari	Government
5	Shiv Narayan Yadav	DHO Sunsari	Government
6	Shiv Dayal Mehata	DHO Sunsari	Government
7	Ram Charitra Meheta	DHO Sunsari	Government
8	Bal Bahadur Basnet	DHO Sunsari	Government
9	Dr. Lochan Subedi	DHO Sunsari	Government
10	Mohamad Samim Ansari	DHO Sunsari	Government
11	Ramjee Prasad Pathak	IOM, Kathmandu	IOM
12	Naveen Shrestha	Consultant	Consultant
13	Yadu Lal Choudhary	NGO RCSD	NGO
14	Sita Kumari Shah	NGO RYC	NGO
15	Hari Dev Shah	Plan Nepal	Plan Nepal
16	Bijay Kumar Shah	Plan Nepal	Plan Nepal
17	Kalawati Changbang	Plan Nepal	Plan Nepal
18	Yogendra Giri	Plan Nepal	Plan Nepal
19	Rajendra Prasad Shah	Plan Nepal	Plan Nepal
20	Yam Bahadur Thapa	Plan Nepal	Plan Nepal
21	Bhagawan D Shrestha	Plan Nepal	Plan Nepal

APPENDIX 6.4: Decision Rules Table for Sample Sizes of 12-30 and Coverage Targets/Average of 5% - 95%.

Sample Size	Average Coverage (Baselines) / Annual Coverage Target (Monitoring and Evaluation)																		
	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
12	0	0	0	1	1	2	2	3	4	5	5	6	7	7	8	8	9	10	11
13	0	0	0	1	1	2	3	3	4	5	6	6	7	8	8	9	10	11	11
14	0	0	0	1	1	2	3	4	4	5	6	7	8	8	9	10	11	11	12
15	0	0	0	1	2	2	3	4	5	6	6	7	8	9	10	10	11	12	13
16	0	0	0	1	2	2	3	4	5	6	7	8	9	9	10	11	12	13	14
17	0	0	0	1	2	2	3	4	5	6	7	8	9	10	11	12	13	14	15
18	0	0	0	1	2	2	3	5	6	7	8	9	10	11	11	12	13	14	16
19	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
20	0	0	0	1	2	3	4	5	6	7	8	9	11	12	13	14	15	16	17
21	0	0	0	1	2	3	4	5	6	8	9	10	11	12	13	14	16	17	18
22	0	0	0	1	2	3	4	5	7	8	9	10	13	13	14	16	16	18	19
23	0	0	0	1	2	3	4	6	7	8	10	11	12	13	14	16	17	18	20
24	0	0	0	1	2	3	4	6	7	9	10	11	13	14	15	16	18	19	21
25	0	0	1	2	2	4	5	6	8	9	10	12	13	14	16	17	18	20	21
26	0	0	1	2	3	4	5	6	8	9	11	12	14	15	16	18	19	21	22
27	0	0	1	2	3	4	5	7	8	10	11	13	14	15	17	18	20	21	23
28	0	0	1	2	3	4	5	7	8	10	12	13	15	16	18	19	21	22	24
29	0	0	1	2	3	4	5	7	9	10	12	13	15	17	18	20	21	23	25
30	0	0	1	2	3	4	5	7	9	11	12	14	16	17	19	20	22	24	26

APPENDIX 6.5: Outcomes of Decision Rules

Table A1. Parsa District: 0-5 months
Table A2. Parsa District: 0-23 months
Table A3. Sunsari District: 0-5 months
Table A4. Sunsari District: 0-23 months

Notes:
Benchmark percentage (based on monitoring targets) of 1st LQAS
Details figures/numbers presented against program average and monitoring targets Numbers highlighted in blue are below program average coverage

* Decision rule based on Monitoring/Coverage Target
** Decision rule based on Program Average Coverage

Table A6.1: Number of *Mothers with children 0-5 months* with inadequate knowledge/practices according to LQAS thresholds (Parsa district)

Field Area (Parsa district)	Breastfeeding	Breastfeeding within 1 hour	Breastfeeding within 8 hours	Colostrum feeding	Low dose Vitamin A to newborn within 48 hrs after birth	ANC check up 4 or more time up to ANM	ANC check up 4 or more time up to MCHW	Counseled during ANC at least 1	TT +2 coverage	Iron tablet during pregnancy 6 months	Albendazole during pregnancy after 3 months	Birth preparedness	Delivery at health institute	Kangaroo care, dried off, heating source	First PNC check-up within 2 days up to ANM	First PNC check-up within 2 days up to MCHW	Second PNC check-up within 3 to 7 days up to ANM	Second PNC check-up within 3 to 7 days up to MCHW	Apply Chlorhexidine on Umbilical stump	Apply Chlorhexidine on Umbilical stump within 24 hrs	Vitamin A after delivery	Know danger sign indicate newborn sick at least 2	Know danger sign of newborn need to seek for treatment at least 1	Know danger sign during pregnancy at least 2	Know danger sign during delivery at least 2	Know danger sign after delivery at least 2	Total substandard intervention
*Monitoring %: Decision Rules (Oct'08)	95%	35%	60%	90%	NA	35%	40%	75%	90%	50%	60%	30%	35%	40%	35%	40%	25%	30%	NA	NA	60%	75%	85%	55%	40%	40%	
** Program Average %: Decision Rule - Baseline (LQAS-Jan'08)	**99.2%: 16**	**17.3%: 1**	**51.0%: 8**	**83.6%: 14**	**2.4%: 1**	**24.2%: 2**	**29.2%: 3**	**69.3%: 11**	**85.9%: 15**	**25.0%: 2**	**36.2%: 5**	**10.9%: 1**	**28.2%: 3**	**28.1%: 3**	**22.6%: 2**	**24.4%: 2**	**1.1%: 1**	**1.18%: 1**	**0.0%: 1**	**0.0%: 1**	**44.2%:6**	**69.8%: 11**	**85.9%: 15**	**46.7%: 7**	**24.7%: 2**	**25.0%: 2**	
1: Thori	18	5	15	13	0	4	5	12	16	5	6	3	3	7	8	9	0	0	0	0	7	16	17	7	7	3	**6**
2: Sedhawa	19	4	9	19	0	3	7	14	17	8	12	5	3	6	5	5	0	0	0	0	12	16	19	16	13	12	**5**
3: Nichuta	19	5	7	12	0	5	6	14	19	6	10	1	7	4	4	4	0	0	0	0	10	16	18	13	6	4	**7**
4: Bagahi	19	1	9	15	0	5	5	12	18	3	6	3	5	5	4	4	0	0	0	0	8	18	18	9	3	3	**5**
5: Bageshwori	19	1	7	16	0	1	2	10	15	4	4	2	4	5	3	3	0	0	0	0	10	9	15	10	3	3	**11**
6: Bisrampur	19	1	7	16	0	4	4	14	18	7	8	4	4	2	5	5	0	0	0	0	9	14	18	12	2	3	**7**
7: Bhikhampur	19	1	6	19	0	3	4	7	14	5	3	2	5	3	4	5	1	1	0	0	14	14	16	8	2	0	**8**
8: Langadi	19	0	9	16	0	1	2	14	15	0	3	0	3	3	3	6	0	0	0	0	3	8	17	5	3	5	**14**
9: Pokhariya	19	4	15	19	2	10	10	18	16	4	9	0	9	11	8	8	0	0	0	0	12	17	19	11	8	12	**5**
10: Pakaha	19	3	9	18	1	3	6	13	17	5	11	2	4	4	3	3	0	0	0	0	11	18	19	15	8	12	**4**
11: Sirsiya	18	3	10	19	0	4	4	16	18	4	9	2	6	5	6	6	0	0	0	0	7	12	18	5	2	4	**6**
12: Birgunj	19	2	8	14	1	6	7	12	17	6	8	2	7	6	3	3	0	0	0	0	10	13	18	5	3	3	**5**
13: Birgunj NP	19	13	16	13	2	12	12	15	19	7	4	2	13	12	3	3	2	2	0	0	5	16	19	10	7	4	**5**
Total substandard		**1**	**4**	**3**	**9**	**2**	**2**	**2**	**1**	**1**	**4**	**2**		**1**			**11**	**11**	**13**	**13**	**2**	**2**		**3**		**1**	

Table A6.2: Number of *Mothers with children 0-23 months* with inadequate knowledge /practices according to LQAS thresholds (Parsa district)

*Monitoring %: Decision Rules (Oct'08)	95%	45%	35%	20%	70%	NA	90%	
** Program Average %: Decision Rule - Baseline (LQAS-Jan'08)	95.1%: 16	36.3%: 5	27.7%: 3	6.0%: 1	56.6%: 9	0.0%: 1	87.4%: 15	
Field Area (Parsa district)	**TT +2 coverage**	**Skill delivery attendant**	**PNC visit for newborn from an appropriate trained health worker with 3 days**	**Family used treat water with effectively**	**Mother live in HH with soap at the place for hand washing**	**Insecticide-treated bed net the previous night**	**Normal weight**	**Total substandard intervention**
1: Thori	19	9	9	3	8	0	18	**2**
2: Sedhawa	19	8	8	0	5	0	19	**3**
3: Nichuta	19	10	4	1	15	0	17	**1**
4: Bagahi	19	6	4	0	15	0	14	**3**
5: Bageshwori	17	6	4	0	6	0	19	**3**
6: Bisrampur	18	4	4	0	14	0	15	**3**
7: Bhikhampur	16	4	4	0	2	0	19	**4**
8: Langadi	19	3	2	0	1	0	15	**4**
9: Pokhariya	19	8	9	1	15	0	18	**1**
10: Pakaha	19	6	3	2	12	0	16	**1**
11: Sirsiya	15	4	6	3	15	0	14	**4**
12: Birgunj	17	8	4	0	16	0	19	**2**
13: Birgunj NP	19	14	8	5	18	0	18	**1**
Total substandard	**1**	**4**	**1**	**6**	**5**	**13**	**2**	

Table A6.3: Number of *Mothers with children 0-5 months* with inadequate knowledge/practices according to LQAS thresholds (Sunsari)

*Monitoring %: Decision Rules (Oct'08)	99 %	40 %	80 %	90 %	50%	40%	50%	80%	85 %	60%	70%	40 %	45 %	45%	35%	40%	20%	20%	NA	NA	70 %	75%	95%	60%	40%	45%	
** Program Average %: Decision Rule – Baseline (Jan'08)	98.2%: 16	33.0%: 4	71.9%: 12	84.6%: 14	3.5%: 1	29.1%: 3	43.5%: 6	71.6%: 12	83.5%: 14	47.7%: 7	62.8%: 10	25.6%: 3	35.8%: 5	36.8%: 5	29.5%: 3	30.9%: 4	0.7%: 1	0.7%: 1	0.0%: 1	0.0%: 1	60.4%:10	62.8%: 10	89.1%: 15	46.7%: 7	17.2%: 1	20.4%: 2	
Field Area (Sunsari district)	Breastfeeding	Breastfeeding within 1 hour	Breastfeeding within 8 hrs	Colostrums feeding	Low dose Vitamin A to newborn within 48 hrs after birth	ANC check up 4 or more time upto ANM	ANC check up 4 or more time upto MCHW	Counseled during ANC at least 1	TT +2 coverage	Iron tablet during pregnancy 6 months	Albendazole during pregnancy after 3 months	Birth preparedness	Delivery at health institute	Kangaroo care, dried off, heating source	First PNC check-up within 2 days up to ANM	First PNC check-up within 2 days up to MCHW	Second PNC check-up within 3 to 7 days up to ANM	Second PNC check-up within 3 to 7 days up to MCHW	Apply Chlorhexidine on Umbilical stump	Apply Chlorhexidine on Umbilical stump within 24 hrs	Vitamin A after delivery	Know danger sign indicate newborn sick at least 2	Know danger sign of newborn need to seek for treatment at least 1	Know danger sign during pregnancy at least 2	Know danger sign during delivery at least 2	Know danger sign after delivery at least 2	**Total substandard intervention**
1: Itahari	19	7	13	18	0	8	11	13	15	10	11	3	8	8	8	9	0	0	0	0	12	9	15	5	4	4	**7**
1a: Itahari NP	19	5	13	17	1	11	11	16	15	12	10	7	14	15	11	11	0	0	0	0	12	14	18	9	2	4	**4**
1b: Dharan NP	19	7	15	16	1	10	12	14	14	6	4	5	11	9	9	9	1	1	0	0	11	13	19	11	5	5	**4**
2: Chatara	19	9	16	17	1	9	10	13	13	11	13	4	5	5	8	9	0	0	0	0	11	9	17	10	3	4	**6**
3: Madhuwan	18	2	10	16	1	3	6	14	17	6	10	8	6	7	5	6	0	0	0	0	10	15	18	7	3	2	**7**
4: Harinagara	19	3	10	13	0	4	5	14	17	6	11	3	3	2	1	1	0	0	0	0	11	9	15	8	3	5	**15**
5: Satterjhora	19	7	15	19	0	4	9	14	14	12	11	6	6	8	7	7	0	0	0	0	11	13	17	13	5	6	**5**
6: Inaruwa	19	3	11	15	0	1	5	13	13	8	14	6	3	3	1	1	0	0	0	0	11	8	19	7	2	3	**15**
6a: Inaruwa NP	19	12	16	16	0	9	9	14	19	9	14	7	16	9	10	10	0	0	0	0	10	14	15	11	3	6	**5**
7: Prakaspur	19	5	17	17	0	6	8	12	18	12	12	5	3	4	3	3	0	0	0	0	13	12	15	5	3	2	**9**
8: Bakalauri	17	10	15	15	1	3	9	14	16	13	17	4	6	10	5	5	0	0	0	0	11	11	17	9	4	3	**4**
9: Madhelee	19	8	13	18	2	5	9	13	15	10	12	4	11	11	6	7	0	0	0	0	17	12	17	10	2	7	**4**
10: Sitagunj	19	5	15	15	1	5	12	16	17	10	14	3	2	5	2	2	0	0	0	0	10	16	18	10	3	2	**7**
11: Dewagunj	18	7	15	15	1	2	2	11	18	8	13	1	2	3	3	3	0	0	0	0	13	10	17	10	3	3	**11**
12: Bhutaha	18	4	11	14	1	3	6	13	17	3	13	7	6	6	5	5	1	1	0	0	9	14	17	8	4	2	**5**
Total substandard		**3**	**4**	**1**	**6**	**2**	**3**	**1**	**2**	**4**	**1**	**1**	**5**	**4**	**3**	**5**	**13**	**13**	**15**	**15**	**1**	**4**		**2**			

Table A6.4: Number of *Mothers with children 0-23 months* with inadequate knowledge/practices according to LQAS thresholds (Sunsari district)

*Monitoring %: Decision Rules (Oct'08)	95%	60%	55%	45%	80%	NA	90%	
** Program Average %: Decision Rule - Baseline (LQAS-Jan'08)	89.8%: 15	47.4%: 7	43.2%: 6	34.7%: 5	73.0%: 12	0.0%: 1	87.0%: 15	
Field Area (Sunsari district)	TT +2 coverage	Skill delivery attendant	PNC visit for newborn from an appropriate trained health worker with 3 days	Family used treat water with effectively	Mother live in HH with soap at the place for hand washing	Insecticide-treated bed net the previous night	Normal weight	Total substandard intervention
1: Itahari	16	10	11	6	15	0	17	1
1a: Itahari NP	17	15	15	9	17	0	16	1
1b: Dharan NP	15	14	14	10	19	0	15	1
2: Chatara	16	12	8	6	15	0	17	1
3: Madhuwan	18	9	6	4	7	0	17	3
4: Harinagara	16	5	6	4	6	0	15	4
5: Satterjhora	17	8	7	5	15	0	17	1
6: Inaruwa	15	7	8	3	9	0	14	4
6a: Inaruwa NP	18	16	14	11	17	0	18	1
7: Prakaspur	18	7	4	5	13	0	16	2
8: Bakalauri	18	7	6	10	17	0	19	1
9: Madhelee	19	12	9	9	14	0	17	1
10: Sitagunj	17	8	8	7	18	0	17	1
11: Dewagunj	19	2	2	6	14	0	19	3
12: Bhutaha	17	3	5	4	12	0	14	5
Total substandard		3	3	4	3	15	2	

APPENDIX 6.6: Ilakawise Recommendations of LQAS Survey

i. Parsa District

a. Module 1: Mothers with children 0-5 months

1. Ilaka: Thori

- Breastfeeding/Colostrum feeding: Awareness to visit in ANC/PNC, Educate to OPD patient, Discussion during, Mother's group meeting, Awareness raise of community people through special program, Educate to higher class student in school and HP, Awareness raise through health education, Message delivery from radio/FM program, Health worker
- Low dose Vitamin "A" to newborn within 48 hrs after birth: Need to lunch national program from MoHP
- Second PNC check-up within 3 to 7 days up to ANM: Educated to mother during ANC/PNC about 2nd PNC visit: Fulfill vacant ANM position; Trained FCHV/TBA about 2nd PNC visit; Established ORC; Need to lunch school health program in higher class school; Continue mother group meeting; Message delivery from mass media e.g. radio/FM
- Know danger sign during pregnancy at least 2: Educate to mothers during ANC/PNC/OPD visit, Awareness raise of community people, Different health activities need to implement

2. Ilaka: Bagahi

- Low dose Vitamin "A" to newborn within 48 hrs after birth: Need to launch national program from MoHP
- Second PNC check-up within 3 to 7 days upto ANM: Message delivery from FCHV; Educate to mother during ANC visit, Establish PNC every a week
- Second PNC check-up within 3 to 7 days upto MCHW: Message delivery from FCHV; Educate to mother during ANC visit; Establish PNC every a week

3. Ilaka: Nichuta

- Breastfeeding within 8 hours: Raise awareness on health education and ANC visit; Regularize mother group meeting
- Colostrums feeding: Educate to mother during ANC visit; Counseling to attend mother's group meeting; Awareness raise on health education
- Low dose Vitamin "A" to newborn within 48 hrs after birth: Need to lunch national program from MoHP
- Second PNC check-up within 3 to 7 days upto ANM: Regularized PNC; Counseling during visit
- Second PNC check-up within 3 to 7 days upto MCHW: Regularized PNC; Counseling during visit

4. Ilaka: Pakaha

- Birth preparedness: Mother's group meeting formation and strengthening; PWG formation BCC material promotion; Supportive group formation

- Kangaroo care, dried off, heating source: Training ORC/PHC counseling corner strengthening; Message delivery on PWG through FCHVs and mother groups; Regular supportive supervision to lactating mother by FCHV

5. Ilaka: Sirsiya
- Second PNC check-up within 3 to 7 days upto ANM: Regularize mother's group meeting; Strengthening of PNC/ORC; Educate to mother during ANC/PNC visit; Fulfill vacant position
- Know danger sign indicate newborn sick at-least 2: Regularize mother's group meeting; Strengthening of ORC; Counseling during ANC visit; Fulfill vacant position
- Know danger sign during pregnancy at least 2: Regularize mother's group meeting; Strengthening of PNC/ORC; Educate to mother during ANC/PNC visit; Fulfill vacant position

6. Ilaka: Bhikhampr
- Breastfeeding within 8 hours: Raise awareness on health education through mother's group meeting, FCHV, School health education, Radio/FM
- Low dose Vitamin "A" to newborn within 48 hrs after birth: Need to lunch national program from MoHP
- Counseled during ANC at least 1: Fulfill the vacant position; Raise awareness on health education
- TT +2 coverage: Continue the TT program
- Albendazole during pregnancy after 3 months: Raise awareness on health education; Increase services
- Kangaroo care, dried off, heating source: Raise awareness on health education through mother's group meeting, FCHV, School health education, Radio/FM
- Know danger sign after delivery at least 2: Raise awareness on health education; Training is required to local health worker on health education

7. Ilaka: Bishrampur
- Breastfeeding within 8 hours: Discussion at VDC level; Discussion on mothers' group meeting; Door to door visit; Supportive supervision; Counseling during ANC visit
- Low dose Vitamin "A" to newborn within 48 hrs after birth: Need to launch national program from MoHP
- Kangaroo care, dried off, heating source: Discussion at VDC level; Discussion on mothers' group meeting
- Know danger sign during delivery at least 2: Continue ORC; Discussion on mother's group meeting; Door to door visit; Street drama; Radio program

8. Ilaka: Sedawa
- Low dose Vitamin "A" to newborn within 48 hrs after birth: Need to lunch national program from MoHP
- First PNC check-up within 2 days upto ANM: Client counseling; Awareness raising; Discussion on mother's group meeting; Continue ORC
- First PNC check-up within 2 days upto MCHW: Use mass media; Refresher training to MCHW; Discussion on mother's group meeting

- Second PNC check-up within 3 to 7 days upto ANM: Use mass media; Refresher training to MCHW; Discussion on mother's group meeting

9. Ilaka: Bageswori
- Breastfeeding within 8 hours: Mother group meeting; Out reach clinic
- Low dose Vitamin "A" to newborn within 48 hrs after birth: Need to lunch national program from MoHP
- ANC check up 4 or more time upto ANM: Fulfill vacant position

- ANC check up 4 or more time upto MCHW: Continue ORC, mother's group meeting and ANC
- Counseled during ANC at least 1: Continue ORC, mother's group meeting and ANC
- Albendazole during pregnancy after 3 months: Regularity of ORC and ANC
- Second PNC check-up within 3 to 7 days upto ANM: Fulfill vacant position
- Second PNC check-up within 3 to 7 days upto MCHW: To start timely all the program
- Know danger sign indicate newborn sick at-least 2: To promote FCHV for counseling the mother
- Know danger sign of newborn need to seek for treatment at least 1: To advice or counseling the FCHV
- Know danger sign during delivery at least 2: To fulfill staff

9. Ilaka: Langadi
- ANC check up 4 or more time upto ANM: Fulfill ANM staff
- Iron tablet during pregnancy 6 months: To proper conduction of mother group meeting; To conduct health education; To fulfill staff
- Albendazole during pregnancy after 3 months: To proper conduction of mother group meeting; To conduct health education; To fulfill staff
- Birth preparedness: To proper conduction of mother group meeting; To conduct health education; To fulfill staff
- Kangaroo care, dried off, heating source: To proper conduction of mother group meeting; To conduct health education; To fulfill staff
- First PNC check-up within 2 days upto ANM: To proper conduction of mother group meeting; To conduct health education; To fulfill staff
- First PNC check-up within 2 days upto MCHW: To proper conduction of mother group meeting; To conduct health education; To fulfill staff
- Second PNC check-up within 3 to 7 days upto ANM: To proper conduction of mother group meeting; To conduct health education; To fulfill staff
- Second PNC check-up within 3 to 7 days upto MCHW: To proper conduction of mother group meeting; To conduct health education; To fulfill staff
- Know danger sign indicate newborn sick at-least 2: To conduct of awareness program; Fulfill of staff
- Know danger sign of newborn need to seek for treatment at least 1: To conduct of awareness program; Fulfill of staff
- Know danger sign during pregnancy at least 2: To conduct of awareness program; Fulfill of staff

- Know danger sign during delivery at least 2: To conduct of awareness program; Fulfill of staff

10. Ilaka: Birgunj HP
    - Colostrums feeding: Formation and strengthening PHC/ORC; Strengthening mother's group meeting; Promotion and supply of IEC materials on MG/PWG/ORC
    - Low dose Vitamin "A" to newborn within 48 hrs after birth: Promotion of program
    - First PNC check-up within 2 days upto ANM: To strengthen PHC/ORC; Message delivery through various group; Review and refresher about quality care to skill practitioner
    - First PNC check-up within 2 days upto MCHW: To strengthen PHC/ORC; Message delivery through various group; Review and refresher about quality care to skill practitioner
    - Second PNC check-up within 3 to 7 days upto ANM: To strengthen PHC/ORC; Message delivery through various group; Review and refresher about quality care to skill practitioner
    - Know danger sign during pregnancy at least 2: Message delivery through various forum e.g. radio, FM; Strengthening and formation to the PWG, Promotion of BCC materials

b. Module 1: Mothers with children 0-23 months

1. Ilaka: Bagahi
    - Nutrition: Raise awareness on breastfeeding and supplementary feeding; Educate on regular weight of child
    - Improved drinking water: Need to increase awareness about safe drinking water

2. Ilaka: Nichuta
    - Insecticide-treated bed net the previous night: Raise awareness; Lunch net distribution program
    - Low dose Vitamin "A" to newborn within 48 hrs after birth: Need to lunch national program from MoHP

3. Ilaka: Bhikhampr
    - Mother live in HH with soap at the place for hand washing: Raise awareness

4. Ilaka: Sedawa
    - Family used treat water with effectively: Raise awareness
    - Mother live in HH with soap at the place for hand washing: Raise awareness
    - Insecticide-treated bed net the previous night: Need to supply

5. Ilaka: Bageswori
    - TT +2 coverage: Mother group meeting; ORC; ANC clinic
    - Family used treat water with effectively: Health education
    - Mother live in HH with soap at the place for hand washing: Health education

6. Ilaka: Langadi
   - TT +2 coverage: To be managed the skill delivery attendant
   - Skill delivery attendant: Increase awareness about PNC visit
   - To be managed trained health worker
   - Family used treat water with effectively: Increase awareness about treat water

7. Ilaka: Birgunj municipality
   - Colostrums feeding: Strategy formation; PHC outreach clinic; Formation and strengthening of PWG; Promotion and supply of IEC material
   - Low dose Vitamin "A" to newborn within 48 hrs after birth: Need to launch national program from MoHP
   - Albendazole during pregnancy after 3 months: Promotion & distribute through FCHV; Distribute from FCHV and out reach clinic; Orient to clinic practitioner in the program
   - Birth preparedness: Counseling during ANC visit; Preparation check list during counseling; Message delivery from various group e.g. mother groups; Formation and support group; Message delivery from Radio/FM
   - Vitamin A after delivery: Provide training to FCHV and launch the activities

ii. Sunsari District

1. Dharan Municipality
   - Coordination meeting with Dharan Municipality (DHO and Plan)
   - Basic training for FCHVs
   - Include all external agencies working towards health
   - Orientation to community based NGOs, local leaders
   - School education

2. Chatara PHC
   - Increase awareness level of pregnant mothers in TT vaccine dose completion through PWG, MG meeting and ANC clinic
   - Increase knowledge of pregnant and under five children mothers about danger signs of sick child through regular mother's meeting, ORC

3. Madhuban PHC
   - Increase knowledge of pregnant mothers about TT vaccine, importance at least four visits of ANC visit and Iron consumption during ANC visit

4. Prakashpur HP
   - Increase knowledge and re-informants of institutional delivery to all pregnant mothers
   - HP need to ensure quality delivery service at HP

5. Bakluari HP
   - Increase knowledge of pregnant mothers about TT vaccine, importance at least four visits of ANC visit and Iron consumption during ANC visit by MCHW

6. Itahari PHC
   - Increase knowledge of pregnant mothers about danger signs during pregnancy and delivery through ORC, PWG and MG meeting

7. Madheli HP
   - Increase knowledge of pregnant mothers about TT vaccine, importance at least four visits of ANC visit and Iron consumption

8. Sattarjhora PHC
   - Increase knowledge of pregnant mothers about TT vaccine, importance at least four visits of ANC visit and Iron consumption during PWG meeting

9. Sitagunj HP
   - Increase knowledge of pregnant mothers about importance at least four visits of ANC visit, PNC and institutional delivery

10. Dewangunj HP
    - Increase knowledge of pregnant mothers about antenatal care, importance of colostrums feeding, breast feeding with in 8 hours, Iron consumption, ANC visit, preparedness of delivery and institutional delivery.
    - Birth preparedness training for health facility staff

11. Harinagara PHC
    - Increase knowledge of pregnant mother importance about ANC & visit, birth preparedness, colostrums feeding, breast-feeding as soon as possible and PNC visit

12. Bhutaha HP
    - Increase knowledge of pregnant mothers about antenatal care & visit, birth preparedness, danger sign of pregnancy, postnatal care, importance of iron consumption and colostrums feeding through PWG meeting

13. Inaruwa HP
    - Increase knowledge of pregnant mothers about TT vaccine, importance at least four visits of ANC visit and Iron consumption, breast feeding, birth preparedness, institutional delivery, immediate care of neonate, danger signs of sick child and Post natal visit

14. Itahari Municipality
    - Increase knowledge of pregnant mothers on birth preparedness during ANC visit

15. Dharan Municipality
    - Increase knowledge of pregnant mothers importance about TT vaccine and intake of albendazole during pregnancy

16. Inaruwa Municipality
    - Increase knowledge of pregnant mothers importance of use of treated water during PWG meeting

17. DHO Sunsari
    - DHO need to consider supplying low dose Vitamin "A", increase services or manage of 2nd post natal visit, mother group meeting effectively, support in PGW formation and supportive supervision on regular basis

APPENDIX 6.7: KPC Questionnaires

District Health Office, Sunsari & Plan Nepal, LIBON Project

Baseline Survey of Sunsari, January 2008

Children under 6 months (Interview to mother with 5 months and 29 days)

1. Field (Supervision) Area # _____ 2. LQAS #_____ 3 Record # _____

4. Interview date: ____/____/____ (dd / mm / yy) 5. Rescheduled interview: ____/____/_____ (dd / mm / yy)

6a. Interviewer's first name: _____ 6b. Interviewer's Last Name: _____

7a. Supervisor's first name: _____ 7b. Supervisor's last name: _____

8. VDC/municipality: _____ 9. Ward No: ____

10. Village/tole: _____

11a. Mother's first name: _____ 11b. Mother's last name:_____

12. Ethnicity: _____ code: [ ] 13. Religion:_____ code: [ ]

14. Mother tongue: _____ code: [ ]

15. Mother's age in years (completed): ____

16. Can you read?
(a) Can read (must read example in Nepali scrip/language) _____[ ]
(b) Can read (other than Nepali scrip/language) please specify_____[ ]
(c) Can't read_____[ ] Go to 18

17. In which study level have you completed?
(a) Informal education_____[ ]
(b) Primary (1-5 class)_____[ ]
(c) Secondary (6-10 class)_____[ ]
(d) Higher Secondary (10 + 2) _____[ ]
(e) University Degree_____[ ]

18. What is your major occupation?
(a) Agriculture_____[ ]
(b) Service_____[ ]
(c) Business_____[ ]
(d) Labor_____[ ]
(e) Housewife_____[ ]
(f) Other specify_____

19a. Child first name or number: _____ 19b. Child last name:_____

20. Child Sex: Male [ ] Female [ ]

21. Child's birth date: ____/____/____
(dd / mm / yy)

Interview date: ____/____/_____
DOB of child: ____/____/_____

22. Child's age in months (completed): _____

BREAST FEEDING AND CHILD NUTRITION

23. Have you ever breastfed (NAME)?
(a) Yes_____[ ]
(b) No_____[ ] Go to 25

24. How long after birth did you first breast-feed to (NAME)?
(a) Immediately/within first hour after delivery _____[ ]
(b) After one to eight hour_____[ ]
(c) After eight hour_____[ ]

25. What did you do colostrum to (NAME)?
(a) Yes_____[ ]
(b) Have thrown_____[ ]
(c) Don't know_____[ ]

26. Did (NAME) receive low dose vitamin "A" (50,000 IU) capsule within 48 hours after birth?
(a) Yes_____[ ]
(b) No_____[ ]

ANTENATAL CARE MODULE

27. Did you antenatal check-up during pregnancy with (NAME)?
(a) Yes_____[ ]
(b) No_____[ ] Go to 30

28. Did you see anyone for antenatal care while you were pregnant with (NAME)? If yes whom did you see? **(Probe for the type of person and record all persons mentioned by the mothers) (Multiple answer possible) –**

Health Professional		**No. of times**
(a) Medical Doctor _____	[ ]	_____
(b) Staff Nurse_____	[ ]	_____
(c) Health Assistant/Sr. AHW_____	[ ]	_____
(d) AHW_____	[ ]	_____
(e) ANM_____	[ ]	_____
(f) MCHW_____	[ ]	_____
Other Person		
(g) Trained-TBA_____	[ ]	_____
(h) Untrained-TBA_____	[ ]	_____
(i) FCHV_____	[ ]	_____
(j) Other Specify_____		_____
(k) None_____	[ ]	

29. During your antenatal check-up, were you counseled on the following: **(Multiple answer possible) (Read choices "A" to "G")**
(a) Birth preparedness plan (transportation, fund, blood donor at least 3)_____[ ]
(b) Breastfeeding_____[ ]
(c) Child spacing_____[ ]
(d) Immunization child / TT mother_____[ ]
(e) Danger signs of pregnancy_____[ ]
(f) Nutrition _____[ ]
(g) Next Visit_____[ ]
(h) None_____[ ]

30. Before you gave birth to (NAME), did you receive *TT 2+ injections?
(a) Yes_____[ ]
(b) No_____[ ]
(c) Don't know_____[ ]

Note: *TT 2+ (One dose TT in last pregnancy who have already got 2 does of TT previous pregnancy OR 5 doses of TT in MNT campaigning)

31. Did you consume iron tablets during pregnancy?
(a) Yes_____[ ]
(b) No_____[ ] Go to 33

32. If yes, when and how many times you consumed?

Period	**Times**					
	1st	**2nd**	**3rd**	**4th**	**5th**	**6th**
No of iron tablet	**30**	**30**	**30**	**30**	**30**	**30**

33. Did you suffer from night blindness during pregnancy?
(a) Yes_____[ ]
(b) No_____[ ] Go to 35

34. Did you receive low-dose vitamin "A" (25,000 IU) during pregnancy?
(a) Yes_____[ ]
(b) No_____[ ]

35. Did you receive single dose of albendazole (400 mg) after completion of third month of last pregnancy?
(a) Yes_____[ ]
(b) No_____[ ]

36. Did you have birth preparedness plan during last pregnancy?
(a) Yes_____[ ]
(b) No_____[ ] Go to 40

37. What was your preparation for birth preparedness plan?
(a) Fund_____[ ]
(b) Transportation_____[ ]
(c) Blood donor at least 3 person_____[ ]
(d) Other specify_____
(e) Don't know_____[ ]

38. Did you consult with near by skill birth attendant /trained health worker to prepare birth preparedness plan during last pregnancy?
(a) Yes_____[ ]
(b) No_____[ ] Go to 40

39. If yes, to whom you consult for birth preparedness plan?
(a) Medical Doctor_____[ ]
(b) Staff Nurse_____[ ]
(c) Health Assistant/Sr. AHW_____[ ]
(d) AHW_____[ ]
(e) ANM_____[ ]
(f) MCHW_____[ ]
(g) VHW_____[ ]

Other person
(h) Trained-TBA_____[ ]
(i) Untrained-TBA_____[ ]
(j) FCHV_____[ ]
(k) Other specify_____

PLACE OF DELIVERY AND DELIVERY ATTENDANTS

40. Where did you give (NAME) birth?
(a) Home_____[ ]
(b) Hospital_____[ ] Go to 45
(c) PHC_____[ ] Go to 45

(d) Health post/SHP_____[ ] Go to 45
(e) NGO Clinic_____[ ]
(f) Private Clinic_____[ ]
(g) Other specify_____

41. Who assisted you during (NAME's) delivery?

Health Professional

(a) Medical Doctor_____[ ]
(b) Staff Nurse_____[ ]
(c) Health Assistant/Sr. AHW_____[ ]
(d) AHW_____[ ]
(e) ANM_____[ ]
(f) MCHW_____[ ]

Other person

(g) Trained-TBA_____[ ]
(h) Untrained-TBA_____[ ]
(i) FCHV_____[ ]
(j) VHW_____[ ]
(k) Family member specify_____[ ]
(l) Other specify_____
(m) None_____[ ]

42. Did the birth attendants wash their hands with soap before assisting delivery?
(a) Yes_____[ ]
(b) No_____[ ]
(c) Don't know_____[ ]

43. Where was (NAME) put immediately after birth?
(a) With mother_____[ ]
(b) In cot_____[ ]
(c) On floor_____[ ]
(d) Bath tub_____[ ]
(e) Other specify_____
(f) Don't know_____[ ]

44. What did you do with (NAME) immediately after birth? **Multiple answer possible**
(a) Breastfed_____[ ]
(b) Bathed_____[ ]
(c) Let sleep_____[ ]
(d) Dried off_____[ ]
(e) Wrapped with clothes_____[ ]
(f) Put on the chest of the mother (kangaroo care)_____[ ]
(g) Warm up by fire or heater_____[ ]
(h) Oil_____[ ]

(i) Other specify_____
(j) Don't know_____[ ]

45. When did you give bath to (NAME)?
(a) Within 24 hours_____[ ]
(b) After 24 hours_____[ ]
(c) Don't bath till date_____[ ]

POSTPARTUM CARE

46. After (NAME) was born, did anyone check on your (mother) health?
(a) Yes_____[ ]
(b) No_____[ ] Go to 49

47. After (NAME) was born, when was your **FIRST post natal check-up** done?
(a) Within 24 hours_____[ ]
(b) Between 24 to 48 hours_____[ ]
(c) Between 48 to 72 hours_____[ ]
(d) Between 72 hours to 7 days_____[ ]
(e) After 7 days_____[ ]

48. Who checked on your (mother) **FIRST** health at that time? **(Probe for most qualified person)**

Health Professional
(a) Medical Doctor_____[ ]
(b) Staff Nurse_____[ ]
(c) Health Assistant/Sr. AHW_____[ ]
(d) AHW_____[ ]
(e) ANM_____[ ]
(f) MCHW_____[ ]
(g) VHW_____[ ]

Other person
(h) Trained-TBA_____[ ]
(i) Untrained-TBA_____[ ]
(j) FCHV_____[ ]
(k) Other specify_____

49. After (NAME) was born, when was your (mother) **SECOND post natal check-up** done?
(a) Within 24 hours_____[ ]
(b) Between 24 to 48 hours_____[ ]
(c) Between 48 to 72 hours_____[ ]
(d) Between 72 hours to 7 days_____[ ]

(e) After 7 days_____[ ]
(f) Never_____[ ] Go to 51

50. Who checked on your (mother) **SECOND** health at that time? **(Probe for most qualified person)**

Health Professional

(a) Medical Doctor_____[ ]
(b) Staff Nurse_____[ ]
(c) Health Assistant/Sr. AHW_____[ ]
(d) AHW_____[ ]
(e) ANM_____[ ]
(f) MCHW_____[ ]
(g) VHW_____[ ]

Other person

(h) Trained-TBA_____[ ]
(i) Untrained-TBA_____[ ]
(j) FCHV_____[ ]
(k) Other specify_____

51. Did anyone check (NAME's) health?

(c) Yes_____[ ]
(d) No_____[ ] Go to 54

52. When was (NAME) **FIRST health checked up**?

(a) Within 24 hours_____[ ]
(b) Between 24 to 48 hours_____[ ]
(c) Between 48 to 72 hours_____[ ]
(d) Between 72 hours to 7 days_____[ ]
(e) After 7 days_____[ ]

53. Who checked of (NAME) **FIRST** health at that time? **(Probe for most qualified person)**

Health Professional

(a) Medical Doctor_____[ ]
(b) Staff Nurse_____[ ]
(c) Health Assistant/Sr. AHW_____[ ]
(d) AHW_____[ ]
(e) ANM_____[ ]
(f) MCHW_____[ ]
(g) VHW_____[ ]

Other person

(h) Trained-TBA_____[ ]
(i) Untrained-TBA_____[ ]

(j) FCHV_____[ ]
(k) Other specify_____

54. When was (NAME) **SECOND health checked up**?
(a) Within 24 hours_____[ ]
(b) Between 24 to 48 hours_____[ ]
(c) Between 48 to 72 hours_____[ ]
(d) Between 72 hours to 7 days_____[ ]
(e) After 7 days_____[ ]
(f) Never_____[ ] Go to 56

55. Who checked of (NAME) **SECOND** health at that time? **(Probe for most qualified person)**
Health Professional
(a) Medical Doctor_____[ ]
(b) Staff Nurse_____[ ]
(c) Health Assistant/Sr. AHW_____[ ]
(d) AHW_____[ ]
(e) ANM_____[ ]
(f) MCHW_____[ ]
(g) VHW_____[ ]

Other person
(h) Trained-TBA_____[ ]
(i) Untrained-TBA_____[ ]
(j) FCHV_____[ ]
(k) Other specify_____

56. Did found any problem during health check-up of (NAME)?
(a) Yes_____[ ]
(b) No_____[ ] Go to 64

57. What types of problem have they found (NAME)? **Multiple answer possible**
(a) Unable to suck the breast_____[ ]
(b) Convulsion/lethargic condition_____[ ]
(c) Respiratory rate 60 or more in a minute_____[ ]
(d) Severe chest in-drawing_____[ ]
(e) Fever_____[ ]
(f) Infected (redness) of umbilical stump_____[ ]
(g) 10 or more blister with pus or 1 big abcess_____[ ]
(h) Weak or unable to cry_____[ ]
(i) Low body temperature (Shitanga)_____[ ]
(j) Strider_____[ ]
(k) Other sepcify_____
(l) Don't know_____[ ]

58. What types of medicine did (NAME) get for the treatment?
(a) Cotrim or other antibiotics_____[ ]
(b) Other specify_____[ ] Go to 61
(c) Don't know_____[ ] Go to 61

59. When did (NAME) start cotrim or other antibiotics treatment?
(a) Within 48 hours_____[ ]
(b) After 48 hours_____[ ]

60. How many days did (NAME) get medicine for the treatment?
(a) One day _____[ ]
(b) Two days _____[ ]
(c) Three days _____[ ]
(d) Four days _____[ ]
(e) Five days _____[ ]
(f) Six days and above_____[ ]

61. What type(s) of injectable medicine did (NAME) get for the treatment?
(a) Gentamycin injection_____[ ]
(b) Other specify_____[ ] Go to 64
(c) Don't know_____[ ] Go to 64

62. When did (NAME) start gentamycin injection for the treatment?
(a) Within 48 hours_____[ ]
(b) After 48 hours_____[ ]

63. How many days did (NAME) get injection for the treatment?
(a) One day _____[ ]
(b) Two days _____[ ]
(c) Three days _____[ ]
(d) Four days _____[ ]
(e) Five days _____[ ]
(f) Six days and above_____[ ]

64. Did you apply anything on umbilical stump?
(a) Chlorhexidine_____[ ]

(b) Ash_____[ ] Go to 66
(c) Oil_____[ ] Go to 66
(d) Oil with turmeric_____[ ] Go to 66
(e) Soap water_____[ ] Go to 66
(f) GV/MC paint_____[ ] Go to 66
(g) Others specify_____
(h) Nothing_____[ ] Go to 66

65. When did you apply chlorhexidine on umbilical stump?
(a) Within 24 hours of birth_____[ ]
(b) After 24 hours of birth_____[ ]

66. Did you receive high dose vitamin "A" (200,000 IU) capsule within 45 days after delivery?
Yes_____[ ]
No _____[ ]

67. What are the signs that may indicate a newborn baby is sick? **(Multiple answer possible)**
(a) Poor feeding_____[ ]
(b) Fast breathing_____[ ]
(c) Severe chest in-drawing_____[ ]
(d) Not active_____[ ]
(e) Red/discharging eye_____[ ]
(f) Diarrhea_____[ ]
(g) Vomiting _____[ ]
(h) Convulsion_____[ ]
(i) Unable to open mouth_____[ ]
(j) Fever_____[ ]
(k) Preterm_____[ ]
(l) Low birth weight_____[ ]
(m) Low body temperature _____[ ]
(n) Red cord red discharge_____[ ]
(o) White pustules (More than 10) or one abscess_____[ ]
(p) Other specify_____
(q) Don't know_____[ ]

68. What are the signs of the illness that would indicate your child needs treatment? **(Multiple answer possible)**

(a) Unable to suck the breast_____[ ]
(b) Convulsion/lethargic condition_____[ ]
(c) Respiratory rate 60 or more in a minute_____[ ]
(d) Severe chest in-drawing_____[ ]
(e) Fever_____[ ]
(f) Infected (redness) of umbilical stump_____[ ]
(g) 10 or more blister with pus or 1 big abcess_____[ ]
(h) Weak or unable to cry_____[ ]
(i) Low body temperature (Shitanga)_____[ ]
(j) Strider_____[ ]
(k) Other specify_____
(l) Don't know_____[ ]

69. What are the danger sign & symptoms during pregnancy indicating the need to seek health care? **(Multiple answer possible)**

(a) Fever_____[ ]
(b) Frequent vomiting_____[ ]
(c) Sever abdominal pain_____[ ]
(d) Sever headache_____[ ]
(e) Anemia_____[ ]
(f) Shortness of breath_____[ ]
(g) PV Bleeding_____[ ]
(h) Swelling of the body/hands/face_____[ ]
(i) Other specify_____
(j) Don't know_____[ ]

70. What are the danger sign & symptoms during delivery indicating the need to seek health care? **(Multiple answer possible)**

(a) Prolonged labor (more than 12 hours and 2nd stage)_____[ ]
(b) Mal-presentation (hand/leg prolapse)_____[ ]
(c) Cord prolapse_____[ ]
(d) Bleeding during delivery_____[ ]
(e) Retained placenta more than 2 hours_____[ ]
(f) Fits/convulsion_____[ ]
(g) Severe headache_____[ ]
(h) Other specify_____
(i) Don't know_____[ ]

71. What are the danger sign & symptoms after delivery indicating the need to seek health care? **(Multiple answer possible)**

(a) Fever_____[ ]
(b) Heavy bleeding (within ½ an hour more than 2 pads soaked)_____[ ]
(c) Foul smelling discharge from vagina_____[ ]
(d) Fits / convulsion_____[ ]
(e) Severe headache_____[ ]
(f) Pale (face and palm) / swelling of legs and face_____[ ]
(g) Uterus prolapse_____[ ]
(h) Other specify_____
(i) Don't know_____[ ]

Thank you!

District Health Office, Sunsari & Plan Nepal, LIBON Project

Baseline Survey of Sunsari, January 2008

Children under 6 months (Interview to mother with 5 months and 29 days)

A. Field (Supervision) Area # _____ B. LQAS #_____ C. Record # _____

D. Interview date: ____/____/____ (dd / mm / yy) E. Rescheduled interview: ____/____/_____ (dd / mm / yy)

Fa. Interviewer's first name: _____Fb. Interviewer's Last Name: _____

Ga. Supervisor's first name: _____ Gb. Supervisor's last name: _____

H. VDC/municipality: _____ I. Ward No: ____

J. Village/tole: _____

Ka. Mother's first name: _____ Kb. Mother's last name:_____

L. Ethnicity: _____ code: [ ] M. Religion:_____ code: [ ]

N. Mother tongue: _____ code: [ ]

O. Mother's age in years (completed): ____

P. Can you read?
(a) Can read (must read example in Nepali scrip/language) _____[ ]
(b) Can read (other than Nepali scrip/language) please specify_____[ ]
(c) Can't read_____[ ] Go to 18

Q. In which study level have you completed?
(a) Informal education_____[ ]
(b) Primary (1-5 class)_____[ ]
(c) Secondary (6-10 class)_____[ ]
(d) Higher Secondary (10 + 2) _____[ ]
(e) University Degree_____[ ]

R. What is your major occupation?
(a) Agriculture_____[ ]
(b) Service_____[ ]
(c) Business_____[ ]
(d) Labor_____[ ]
(e) Housewife_____[ ]
(f) Other specify_____

19a. Child first name or number: _____ 19b. Child last name:_____

20. Child Sex: Male [ ] Female [ ]

72. Child's birth date: ____/____/____
(dd / mm / yy)

Interview date: ____/____/_____
DOB of child: ____/____/_____

73. Child's age in months (completed): _____

No.	Questions and Filters	Coding Categories	Skip
Introduction/ Child Spacing			
1	What is the name, sex, date of birth of your youngest child that you gave birth to and that is still alive?	Name first name or number: _____ Child Last Name: _____ Child Sex: Male [ ] Female [ ] Child's birth date: ____/ ____ / ____ DD / MM / YY Child's age in month (completed): _____	
Maternal and Newborn Care			
No.	**Questions and Filters**	**Coding Categories**	**Skip**
2	During your pregnancy with (Name) did you receive an injection in the arm to prevent the baby from getting tetanus, that is convulsions after birth?	Yes_____1 No_____2 Don't know_____9	 ➔ 4 ➔ 4
3	While pregnant with (name), how many times did you receive such an injection?	One_____1 Two_____2 Three or More_____3 Don't know_____9	
4	Did you receive any tetanus toxoid injection at any time before that pregnancy, including during a previous pregnancy or between pregnancies?	Yes_____1 No_____2 Don't know_____9	 ➔ 6 ➔ 6

No.	Questions and Filters	Coding Categories	Skip
5	Before the pregnancy with (Name), how many times did you receive a tetanus injection?	One_____1 Two_____2 Three or More_____3 Don't know_____9	
6	Who assisted with the delivery of (Name)? Anyone else? **PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED.** **IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.**	Doctor_____A Nurse_____B Midwife_____C Auxiliary Midwife_____D Other Health Staff with midwifery skills_____E Trained Traditional Birth Attendant_____F Trained Community Health Worker_____G Traditional Birth Attendant_____H Community Health Worker_____I Relative/Friend_____J No one_____Y	
Questions 7-9 refer to the youngest child shortly after birth			
7	After (Name) was born, did any health care provider or traditional birth attendant check on (Name's) health?	Yes_____1 No_____2	 ➔ 10

No.	Questions and Filters	Coding Categories	Skip
8	How many hours, days or weeks after the birth of (Name) did the first check take place? **IF LESS THAN ONE DAY, CIRCLE 0 AND RECORD HOURS; IF ONE TO SIX DAYS CIRCLE 1 AND RECORD DAYS; IF MORE THAN 6 DAYS CIRCLE 2 AND RECORD WEEKS.**	0 Hours ☐☐ ☐☐ Days 1 ☐☐ Weeks 2 Don't Know_____998	
9	Who checked on (Name's) health at that time? Anyone else? **PROBE FOR THE MOST QUALIFIED PERSON AND RECORD ALL MENTIONED.**	Doctor_____A Nurse_____B Midwife_____C Auxiliary Midwife_____D Other Health Staff with midwifery skills_____E Trained Traditional Birth Attendant_____F Trained Community Health Worker_____G Traditional Birth Attendant_____H Community Health Worker_____I Relative/Friend_____J No one_____Y	

Breastfeeding/ Infant and Young Child Feeding					
10	Now I would like to ask you about liquids or foods (NAME) had yesterday during the day or at night. Did (NAME) drink/eat: **READ THE LIST OF LIQUIDS (A THROUGH E, STARTING WITH "BREAST MILK").**	YES	NO	DK	
	A. Breast milk?	1	2	9	
	B. Plain water?	1	2	9	
	C. Commercially produced infant formula?	1	2	9	
	D. Any fortified, commercially available infant and young child food" [e.g. Cerelac]?	1	2	9	
	E. Any (other) porridge or gruel?	1	2	9	
11	**PLEASE FILL OUT THE FOLLOWING TABLE WITH THE ANSWERS TO THE QUESTIONS BELOW:** Now I would like to ask you about (other) liquids or foods that (NAME) may have had yesterday during the day or at night. I am interested in whether your child had the item even if it was combined with other foods. Did (NAME) drink/eat:				
	GROUP 1:DAIRY	**YES**	**NO**	**DK**	
	A. **CHECK Q.10C – IF YES, CIRCLE YES HERE** Commercially produced infant formula?	1	2	9	
	B. Milk such as tinned, powdered, or fresh animal milk?	1	2	9	
	C. Cheese, yogurt, or other milk products?	1	2	9	
	GROUP 2: GRAIN	**YES**	**NO**	**DK**	
	D. **CHECK Q.10D – IF YES, CIRCLE YES HERE** Any fortified, commercially available infant and young Child food (e.g. Cerelac)?	1	2	9	

	E. **CHECK Q.10E – IF YES, CIRCLE YES HERE** Any (other) porridge or gruel?	1	2	9	
	F. Bread, rice, noodles, or other foods made from grains?	1	2	9	
	G. White potatoes, white yams, manioc, cassava, or any other foods made from roots?	1	2	9	
	GROUP 3: VITAMIN A RICH VEGETABLES	**YES**	**NO**	**DK**	
	H. Pumpkin, carrots, squash, or sweet potatoes that are yellow or orange inside?	1	2	9	
	I. Any dark green leafy vegetables?	1	2	9	
	J. Ripe mangoes, papayas or (INSERT ANY OTHER LOCALLY AVAILABLE VITAMIN A-RICH FRUITS)?	1	2	9	
	K. Foods made with red palm oil, palm nut, palm nut pulp sauce?	1	2	9	
	GROUP 4: OTHER FRUITS/VEGETABLES	**YES**	**NO**	**DK**	
	L. Any other fruits or vegetables like oranges, grapefruit or pineapple?	1	2	9	
	GROUP 5: EGGS	**YES**	**NO**	**DK**	
	M. Eggs?	1	2	9	
	GROUP 6: MEAT, POULTRY, FISH	**YES**	**NO**	**DK**	
	N. Liver, kidney, heart or other organ meats?	1	2	9	
	O. Any meat, such as beef, pork, lamb, goat, chicken, or duck?	1	2	9	
	P. Fresh or dried fish or shellfish?	1	2	9	
	Q. Grubs, snails, insects, other small protein food?	1	2	9	
	GROUP 7: LEGUMES/NUTS	**YES**	**NO**	**DK**	
	R. Any foods made from beans, peas, lentils, or nuts?	1	2	9	
	GROUP 8: OILS/FATS	**YES**	**NO**	**DK**	
	S. Any oils, fats, or butter, or foods made with any of these?	1	2	9	
	T. **CHECK 11A – 11S: HOW MANY FOOD GROUPS (GROUPS 1-8 IN ABOVE TABLE) HAVE AT LEAST 1 'YES'**	Number of Groups			

	CIRCLED?		
	GROUP 9: OTHER FOODS	**YES NO DK**	
	U. Tea or coffee?	1 2 9	
	V. Any other liquids?	1 2 9	
	W. Any sugary foods, such as chocolates, candy, sweets, pastries, cakes, or biscuits?	1 2 9	
	X. Any other solid or soft food?	1 2 9	
12	How many times did (NAME) eat solid, semi-solid, or soft foods other than liquids yesterday during the day or at night? **IF CAREGIVER ANSWERS SEVEN OR MORE TIMES, RECORD "7"** **WE WANT TO FIND OUT HOW MANY TIMES THE CHILD ATE ENOUGH TO BE FULL. SMALL SNACKS AND SMALL FEEDS SUCH AS ONE OR TWO BITES OF MOTHER'S OR SISTER'S FOOD SHOULD NOT BE COUNTED.** **LIQUIDS DO NOT COUNT FOR THIS QUESTION. DO NOT INCLUDE THIN SOUPS OR BROTH, WATERY GRUELS, OR ANY OTHER LIQUID.** **USE PROBING QUESTIONS TO HELP THE RESPONDENT REMEMBER ALL THE TIMES THE CHILD ATE YESTERDAY**	Number of Times ☐ Don't Know…… …….9	
	Vitamin A Supplementation		
13	Has (Name) ever received a Vitamin A dose (like this/any of these)? **SHOW COMMON TYPES OF AMPULES/CAPSULES/SYRUPS**	Yes_____1 No_____2 Don't know_____9	 ➔ 15 ➔ 15
14	Did (Name) receive a Vitamin A dose within the last 6 months?	Yes_____1 No_____2	

		Don't know_____9	
	Child Immunizations		
15	Do you have a card or child health booklet where (Name's) vaccinations and Vitamin A (capsules) are written down? **If yes:** May I see it please?	Yes_____1 No_____2 Don't know_____9	 ➔18 ➔ 18
16	**COPY VACCINATION DATE FOR VITAMIN A, DTP1, DTP3 AND MEASLES FROM THE CARD OR BOOKLET.** **IF VACCINES ARE NOT RECORDED IN CHILD HEALTH CARD OR BOOKLET, FILL IN 99/99/9999.**	Day Month Year Vitamin A…|___||___|/|___||___|/|___||___|___||___| DTP1……|___||___|/|___||___|/|___||___||___||___| DTP3…….|___||___|/|___||___|/|___||___||___||___| Measles…|___||___|/|___||___|/|___||___||___||___|	
17	Has (NAME) received any vaccinations that are not recorded on this card, including vaccinations given during immunization campaigns?	Yes_____1 No_____2 Don't know_____9	 ➔ 21 ➔ 21
18	Has (NAME) received a DTP vaccination, that is, an injection given in the thigh, sometimes at the same time as polio drops?	Yes_____1 No_____2 Don't know_____9	 ➔ 20 ➔ 20
19	How many times?	NUMBER OF TIMES_____ ☐	

20	Did (Name) ever receive an injection in the arm to prevent Measles?	Yes_____1 No_____2 Don't know_____9	
Malaria - Treatment of Fever of Child			
21	Has (Name) been ill with fever at any time in the last 2 weeks?	Yes_____1 No_____2 Don't know_____9	 ➔ 26 ➔ 26
22	Did you seek advice or treatment for the fever?	Yes_____1 No_____2	 ➔ 24
23	How many days after the fever began did you first seek treatment for (Name)?	Same day_____0 Next day_____1 Two or more days_____2	
24	At any time during the illness did (Name) take any drugs for the fever?	Yes_____1 No_____2 Don't know_____9	 ➔ 26 ➔ 26
25	What drugs did (Name) take? Any other drugs? **RECORD ALL MENTIONED.** **ASK TO SEE DRUG(S) IF TYPE OF DRUG IS NOT KNOWN. IF TYPE OF DRUG IS STILL NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT** ****COUNTRY SPECIFIC BASED ON**	ANTI-MALARIAL A. SP/Fansidar____0 1 2 9 B. Chloroquine____0 1 2 9 C. Amodiaquine___0 1 2 9 D. Quinine _____0 1 2 9 E. ACT_____0 1 2 9	

	NATIONAL MALARIAL PROTOCOL. **FOR EACH ANTIMALARIAL MEDICINE ASK:** How long after the fever started did (NAME) start taking the medicine? **CIRCLE THE APPROPRIATE CODES:** **SAME DAY = 0** **NEXT DAY AFTER THE FEVER = 1** **TWO OR MORE DAYS AFTER THE FEVER = 2** **DON'T KNOW = 9**	OTHER DRUGS F. ASPRIN _____0 1 2 9 G. PARACETAMOL__0 1 2 9 X. Other_____0 1 2 9	
	Control of Diarrhea		
26	Has (Name) had diarrhea in the last two weeks?	Yes_____1 No_____2 Don't know_____9	 ➔ 28 ➔ 28
27	Was s/he given any of the following to drink at any time since s/he started having diarrhea: **READ CHOICES ALOUD:** a) A fluid made from a special packet called (local name for ORS packet)? b) A pre-packaged ORS liquid? c) A government-recommended homemade fluid? **SHOW LOCALLY AVAILABLE ORS PACKAGE OR PICTURE.**	Yes No DK A. Fluid from ORS Packet_1 2 9 B. ORS Liquid_____1 2 9 C. Homemade fluid____1 2 9	
	ARI/Pneumonia		
28	Has (Name) had an illness with a cough that comes from the chest at any time in the last two weeks?	Yes_____1 No_____2 Don't know_____9	 ➔ 32 ➔ 32

29	When (Name) had an illness with a cough, did he/she have trouble breathing or breathe faster than usual with short, fast breaths?	Yes_____1 No_____2 Don't know_____9	 ➔ 32 ➔ 32
30	Did you seek advice or treatment for the cough/fast breathing?	Yes_____1 No_____2	 ➔ 32
31	Who gave you advice or treatment? Anyone else? **RECORD ALL MENTIONED.**	Doctor_____A Nurse_____B Auxiliary Nurse_____C Trained Community Health Worker_____D Other_____X	
	Water and Sanitation		
32	Do you treat your water in any way to make it safe for drinking?	Yes_____1 No_____2	 ➔ 34
33	If yes, what do you usually do to the water to make it safer to drink? **ONLY CHECK MORE THAN ONE RESPONSE IF SEVERAL METHODS ARE USUALLY USED TOGETHER, FOR EXAMPLE, CLOTH FILTRATION AND CHLORINE.**	Let it stand and settle/sedimentation_____A Strain it through cloth_____B Boil_____C Add bleach/Chlorine_____D Water filter (Ceramic, sand, composite)_____E Solar Disinfection…….F Other.....X	

		Don't Know……..Z	
34	*Can you show me where you usually wash your hands and what you use to wash hands?* **ASK TO SEE AND OBSERVE**	Inside/near toilet facility .....1 Inside/near kitchen/cooking place2 Elsewhere in yard.....3 Outside yard .....4 No specific place .....5 No permission to see 8	 ➔ 36 ➔ 36
35	**OBSERVATION ONLY: IS THERE SOAP OR DETERGENT OR LOCALLY USED CLEANSING AGENT?** **THIS ITEM SHOULD BE EITHER IN PLACE OR BROUGHT BY THE INTERVIEWEE WITHIN ONE MINUTE. IF THE ITEM IS NOT PRESENT WITHIN ONE MINUTE CHECK NONE, EVEN IF BROUGHT OUT LATER.**	Soap.....1 Detergent.....2 Ash .....3 Mud/sand.....4 None .....5 Other 6	
	Malaria – ITN use		
36	Does your household have any mosquito nets that can be used while sleeping?	Yes……1 No…….2	 ➔ 41
37	Who slept under a bed net last night? **If ANYONE OTHER THAN THE CHILD IS MENTIONED, RECORD OTHER.**	No One…….0 Child (Name)……..……..1 Other …….....2	➔ 41 ➔ 41

38	Which brand of bed net did (Name) sleep under last night? **SHOW PICTURES OF TYPICAL NET TYPES AND BRANDS.**	<u>Permanent Net</u> Brand A….....1 Brand B……..….…2 <u>Pretreated Net</u> Brand C……...…….3 Brand D……..…….4 <u>Other Net</u> Other Net ….…….….....5 Don't know brand.……..……9	 ➔ 41 ➔ 41
39	Was the bed net that (Name) slept under last night ever soaked or dipped in a liquid treated to repel mosquitoes or bugs?	Yes……...……1 No……...….2 Don't know……. 9	 ➔ 41 ➔ 41
40	How long ago was the net last soaked or dipped in a liquid treated to repel mosquitoes or bugs? **IF LESS THAN 1 MONTH AGO, RECORD 00 MONTHS. IF LESS THAN 2 YEARS AGO, RECORD MONTHS AGO. IF 12 MONTHS AGO OR 1 YEAR AGO, PROBE FOR EXACT NUMBER OF MONTHS.**	Months ☐☐ More than 2 years ago..95 Don't Know……....98	
Anthropometrics			
41	May I weigh (Name)?	Yes……...……1 No,,,…….2 |___||___| . |___| Kilograms	 ➔ end

Thank the mother for the interview.

APPENDIX 6.8: Enrollment Form for Exit Interview

HEALTH FACILITY ASSESSMENT

You have been randomly chosen to be in a health facility assessment. We would like to observe the care that your child receives and interview you afterwards.

Case #:

Age of the child (in completed months):

Reason for the visit: (circle all that apply)

- Fever / Malaria
- Diarrhea
- Cough or Rapid/difficult breathing

Annex 7: Caste/Ethnic Groupings

1. Dalit

- Hill : Kami, Damai, Sarkii, Gaine, Badi
- Terai: Chamar, Mushar, Dhusah/Paswan, Tatma, Khatway, Bantar, Dom, Chidimar, Dhobi, Halkhor

2. Disadvantaged Janajatis

- Hill : Magar, Tamang, Rai, Limbu, Sherpa, Bhote, Walung, Byansi, Hyolomo, Garrti/Bhujel, Kuumal, Sunsar, Baramu, Pahari, Yakkah, Chhantal, Jirel, Darai, Dura Majhi, Danuwar, Thami, Lepcha Chepang, Bote, Raji, Hayu, Raute, Kusunda,
- Terai : Tharu, Dhanuk, Rajbansi, Tajpuriya, Gangai, Dhimarl, Meche, Kisan, Munda Santhal/Satar, Dhangad/Jhangad, Koche, Pattarkatta/Kusbadiay

3. Disavantaged non-dalit Terai caste groups:

Yadav, Teli, Kalwar, Sudhi, Sonar, Lohar, Koiri, Kurmi, Kanu,Haluwai, Hajam/Thakur, Badhe, Bahae, Rajba Kewat, Mallah, Nuniya, Kumhar, Kahar, Lodhar, Bing/Banda, Bhediyar, Mali, Kumar, Dhunia

4. Religious minorities

Muslims, Churoute

5. Relatively advantaged Janajatis

Newar, Thakali, Gurung

6. Upper caste groups

Brahman (hill), Chhetri, Thakuri, Sanyasi, Brahman (Terai), Rajput, Kayastha, Baniya, Marwadi, Jaine, Nuraang, Bengali

Annex 8: Pregnant Women's Group Strategy

Pregnant Women's Group - An Approach for Improving Mother and Child Health in Rural Nepal

Background

In February 2003, during a staff meeting held to review the findings of a lot quality assessment implemented as part of Plan's USAID-funded CS project, an important issue was raised. The mothers' groups conducted by female community health volunteers were not serving a useful purpose. Pregnant women and mothers of under-five children were not participating as expected and key project messages were not being delivered. During the discussion, the project team came up with a strategy to rejuvenate mother's groups -- the creation of pregnant women's groups.

What is Pregnant Women's Group?

This is a group comprising of 7-15 pregnant women living in the same village who meet once a month to discuss issues related to mother and child health. Postnatal mothers, mothers of under-five children, and mother in laws are also encouraged to participate. Female community health volunteers facilitate the meetings. Outreach workers from the local health facility, especially Village Health Workers and Maternal and Child Health Workers, are encouraged to participate and support the sessions technically and managerially. In some areas group meetings are linked with outreach clinics operated by the outreach workers.

The administrative boundary of a particular community is not the chief criterion in constituting a group. Easy access for members is more important. In general, walking distance for participating women should not be more than ten minutes. Staff members from the project and the local health facility help the volunteer in managing the group. The aim is to empower the group in such a way that members are able to demand basic health services of a high quality from government and non-governmental health care providers. The volunteers and participating women make all the decisions required to create and operate the group.

Goal and Objectives

The goal is to empower female community health volunteers, traditional birth attendants, and pregnant women by enhancing their ability to organize themselves in groups to discuss health issues, gain access to health services, and improve the health status of under-five children and women of reproductive age. Objectives of the groups may vary.*

Indicators *

Indicators are updated for each participant during monthly meetings by placing a colored dot on the social map (see Figures 1 and 2 at the end of this report for examples of social maps tracking the indicators below; Figure 3 is a form used to summarize indicator information).

- Number of tetanus toxoid injections received
- Number of months she has consumed an iron supplement
- Number of antenatal checkups
- Whether she has procured a clean home delivery kit (or other safe delivery materials) in preparation for delivery
- Whether she consulted facility staff for any danger signs

Creation and Management of Group

The following steps are followed to create and manage the groups and to share health-related information during group sessions.

- Project staff members discuss the concept with local health facility staff (chief of health post or sub-health post, auxiliary nurse midwife, auxiliary health worker, maternal and child health workers, and village health workers).
- Project and health facility staff members orient female community health volunteers and traditional birth attendants to the strategy. The volunteers decide the number of participants and the geographical area from which participants will be drawn.
- Pregnant women are invited to get together for a social mapping session. They draw a map of their community on the ground. Volunteers use participatory rural appraisal techniques to facilitate the session. Participants identify major trails, roads, intersections, temples, schools, and the volunteer's house on the map. Then they locate their own houses by placing a stone or piece of brick on the map.
- The map is copied onto a large piece of white cloth. Marker pens are used to draw lines and boundaries. Volunteers stick printed icons on the map to show the location of public, private, and religious institutions and houses, schools, and health posts.
- Each pregnant woman is asked to update the status of health indicators (listed in Section 4) by sticking colored dots next to her house on the map.
- The volunteer distributes iron tablets to participants. She also administers vitamin A capsules to postnatal women and family planning commodities to married women who join the session.
- Participants discuss and schedule a date and time for the next session.
- The volunteer delivers an educational talk of 10-15 minutes at the end of the session.
- The volunteer makes home visits to deliver supplements (such as vitamin A) to those women who are unable to attend the session.

Role of Female Community Health Volunteers, Health Workers, and Project Staff

The following are the major responsibilities of female community health volunteers.

- Explain the purpose of the group to pregnant women and schedule a date and venue for social mapping.
- Procure materials required for the social mapping session from project staff.
- Invite Maternal and Child Health Worker, Village Health Worker, and project field staff to join the group during the first few sessions (especially the first two meetings).
- Contact pregnant women prior to the first session to ensure that they understand the purpose of the session and to remind them about the date, time and venue.
- Bring necessary educational materials and other supplies to the sessions.
- Facilitate the sessions.

Health workers from the local health facility and project field staff are expected to provide technical and managerial support to the female community health volunteer. Health workers are responsible for supplying iron supplements, high dose vitamin A capsules, family planning commodities, oral rehydration solution packets, and cotrimoxazole tablets. Project field staff are expected to provide commodities that are not available at the local health facility.

Sustainability

Pregnant women's groups are likely to continue meeting after project funding finishes because of the following reasons.

- The groups do not require a lot of resources. Start-up supplies (materials for preparing the social map) cost less than one US dollar per group. Most materials are locally produced.
- Constitution of mothers' groups is an important component of the national strategy for community mobilization for health. Therefore, Ministry of Health workers from local facilities will continue to support female community health volunteers in forming and facilitating pregnant women's groups in future.
- Pregnant women who participate in group meetings benefit from them. They get easy access to health advice and nutritional supplements; this motivates them to participate in future sessions.

* PWGs serve as a platform for demand creation as well as service provision. PWG objectives, indicators, and activities will therefore be modified and expanded upon as needed to meet the objectives of the LIBON project.

Figure 1. Community map

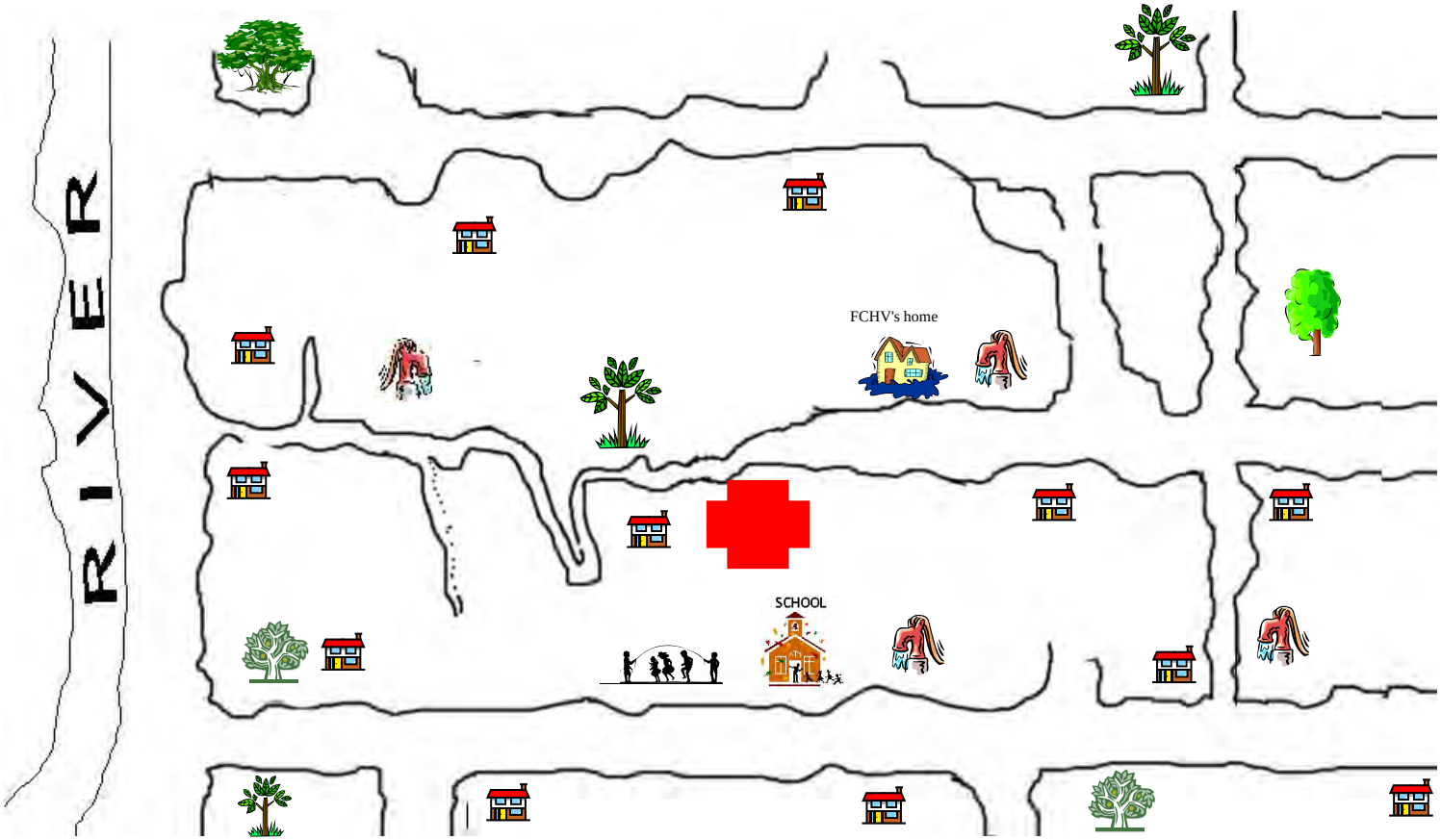


Figure 2. Community map with information on health indicators

Legend
(1) Red dots: Antenatal care checkup
(2) Blue dots: Tetanus toxoid
(3) Black dots: Iron and folic acid
(4) Green dots: Preparation for delivery and procurement of clean home delivery kit

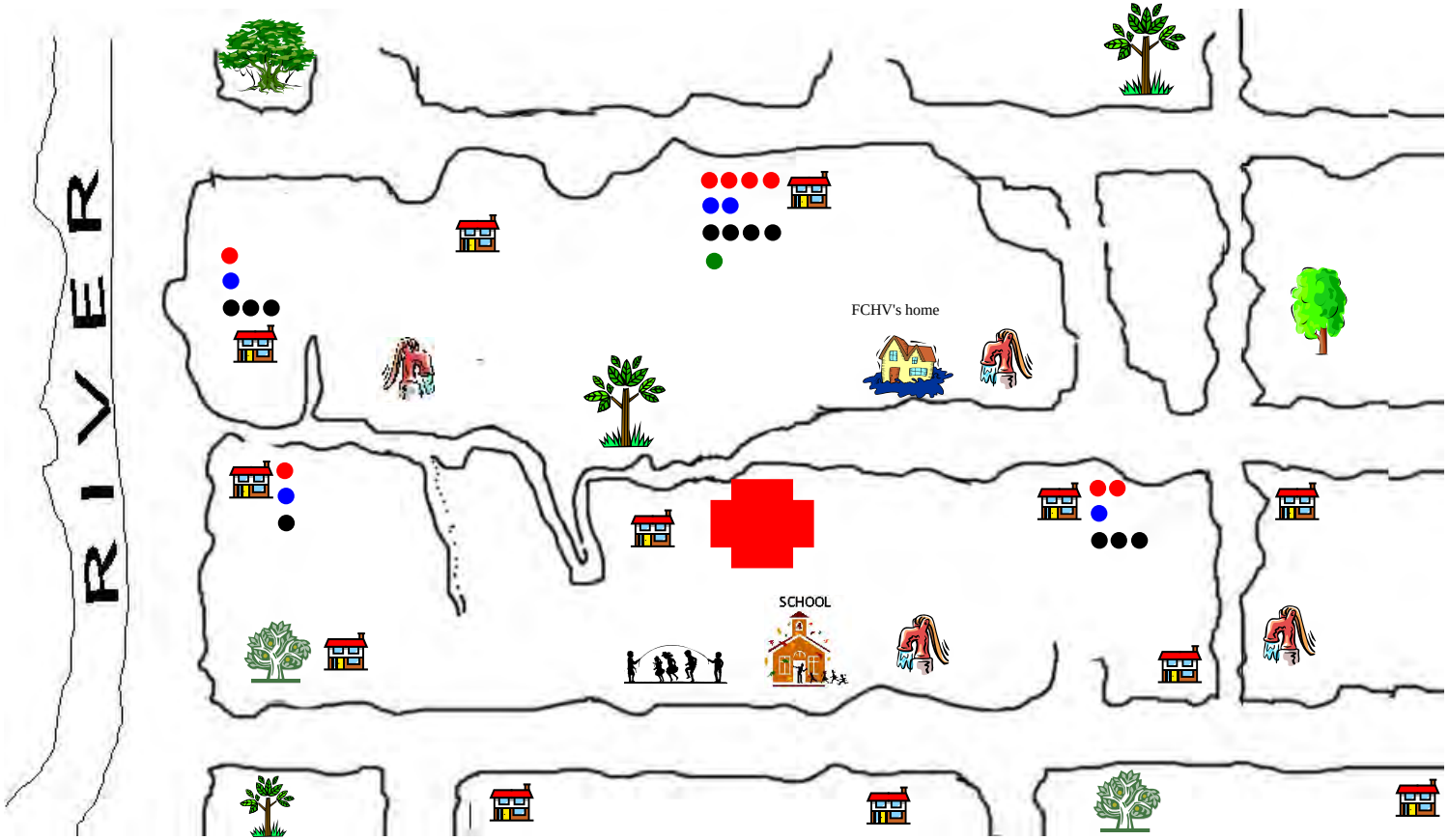


Figure 3. Pregnant women's group reporting form

Plan Nepal
Rautahat/Bara PU
Year: _____ FA#: ____ VDC Name: _____ VDC Code:____ Ward#: __
Child Survival Project

Pregnant Women's Group Recording Sheet

Indicators	Month												Total
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
1) ANC Check-up 1a) First (I)													
1b) Second (II)													
1c) Third (III)													
1d) Fourth (IV)													
2) Iron consumption 2a) First (I)													
2b) Second (II)													
2c) Third (III)													
2d) Forth (IV)													
3) TT 3a) TT 1 (I)													
3b) TT 2 (II)													
4) Delivery preparation 4a) # of CHDK purchase													
Total # of pregnant women													
5) # of mothers delivered													
6) Vitamin A given													

Annex 9: Agreements

a. MOU with Ministry of Health and Population (MoHP)
b. MOU with Institute of Medicine (IOM)
c. MOU with Nepal Family Health Program (NFHP)

a. <u>MOU with Ministry of Health and Population (MOHP)</u>

MEMORANDUM OF UNDERSTANDING

BETWEEN:

THE MINISTRY OF HEALTH & POPULATION

KATHMANDU, NEPAL

AND

Plan Nepal

Lalitpur, Nepal
P.O. Box 8980
Shree Durbar, Pulchowk
Tel. 1-55-35-580
Fax. 1-55-36-431

MOU between Plan Nepal and MOHP July 2008 Page 1 of 5

Plan

Plan-MOHP MOU cover page (1 of 5)

Plan Nepal,

Hereinafter designated and referred to as "Plan" and represented by its country Director, **Prem Shukla**

AND

THE MINISTRY OF HEALTH & POPULATION,

Herein after designated and referred to as "MOHP" and represented by the Ministry of Health & Population, Department of Health Services, Child Health Division, Director **Dr. Yashovardhan Pradhan**

PREAMBLE:

- Considering the Government Policy of providing health services to the people through the full participation of the communities;
- Considering Plan's vision of a world in which all children realize their full potentials in societies which respect people's rights and dignities ;
- Considering Plan's mission of achieving lasting improvement in the quality of life of deprived children in developing countries through a process that unites people across cultures and adds meaning and value to their lives;
- Mindful of the Nepal national health policy of rendering quality health services accessible to the entire population through the development of Health Districts and

Hereby agree as follows:

ARTICLE 1: PURPOSE OF THE AGREEMENT

The purpose of this agreement is to define and establish the terms of undertaking of the partnership between the Ministry of Health & Population, on the one hand and Plan Nepal, on the other hand, with respect to the planning, implementation and evaluation of USAID funded LIBON (local innovation for better outcomes for neonates) in the districts of Bara, Parsa and Sunsari. However, the lessons learnt can be used to other districts as appropriate.

Plan

ARTICLE II:- NATURE OF THE COLLABORATION

a) Plan undertakes to collaborate with the MOHP in working towards ensuring the survival, protection and health development of children as well as the promotion of the reproductive health of adolescents and women of child bearing age.

b) This collaboration will focus on the elaboration and re-enforcing of community centered child survival (neonatal initiatives) refer to USAID funded LIBON (local innovation for better outcomes for neonates) project.

ARTICLE III: OBLIGATIONS OF EACH PARTNER

a) Plan Nepal

Plan undertakes to:

1. Respect and work within the sectarian policies of the Government of Nepal as laid-down by the MOHP.

2. Ensure the close collaboration of competent MOHP authorities in the initiation and implementation of health projects at all levels of the health system (central, provincial and operational levels).

3. Provide funds and other resources for short-term management and technical training for upgrading the skills of MOHP staff involved in the implementation of Plan-assisted interventions.

4. Contribute, where possible, towards the operation and maintenance costs of all equipment related to LIBON (local innovation for better outcomes for neonates) project put at her disposal by MOHP for the execution of Plan-assisted activities.

5. Submit to the MOHP, for information and assessment, work plans and annual and special reports of activities during the course of each fiscal year.

6. Review, in collaboration with the personnel of MOHP, on-going health programs, on an annual basis or as deemed necessary, in order to evaluate progress and resolve difficulties;

7. While maintaining her identity as an international humanitarian development organization, without religious, political or government affiliation, ensure that Plan employed staff do not involve themselves directly or indirectly in any activity incompatible with the goals of this agreement.

Plan

Plan-MOHP MOU page 3 of 5

b) MINISTRY OF HEALTH AND POPULATION

MOHP undertakes to:

1. Uphold Plan's status and independence as an international, non-profit, child focused development organization, that intervenes, amongst others, in the health sector and thereby permit Plan to collaborate with MOHP's efforts to improve the access of deprived communities to quality health services as defined in this Agreement.

2. Facilitate Plan's work and support her towards the achievement of her developmental goals in the area of health in Nepal.

3. Provide to Plan, on her request, technical assistance in relation to the implementation of Plan-assisted programs.

4. Facilitate the full participation of the personnel of the MOHP, at all levels of the health system, in the implementation of Plan-assisted health activities;

5. Facilitate Plan's access to health statistical data and other information held by the services of the MOHP and required for the execution of Plan-assisted programs;

6. As far as availability, where the need might arise, the use of some of its existing buildings, equipment and other logistic support to facilitate the implementation of Plan-assisted health activities;

7. Maintain and sustain all interesting results achieved in Plan-assisted health projects when Plan eventually phases out from the community;

8. Protect Plan from liability to any person for all activities performed under the terms of this agreement.

ARTICLE IV: DURATION OF THE AGREEMENT

a) The present agreement is made to last for 29 September 2011, as from the date of signing by both parties and renewable upon mutual consent.

b) This agreement may be renewed, amended or revised if both parties so agree in writing. Amendments or revisions shall take effect from the date of signing by both parties.

c) Either party may discontinue the agreement with a ninety-day advance written notice specifying the reasons for the termination.

Plan

ARTICLE V: SPECIAL PROVISIONS

a) The continued validity of the present Agreement is subject to the respect of the herein-described undertaking by both partners.

b) If the performance of the undertaking by either party is delayed, hindered, prevented or is frustrated by reason of force majeure, including but not limited to: floods, fire, explosion, and other similar circumstances beyond the parties control which has directly prevented the party in default or breach from observance of such term, either party will be at liberty to declare force majeure without assigning any reason whatsoever, thus, making the understanding null and void without prejudice to any liability in damage or penalty whatsoever.

ARTICLE VI: SIGNATORIES

Prem Shukla
Country Director
Plan Nepal
Country Office
Kathmandu
Nepal

DATE: 28 July 2008

Dr. Yashovardhan Pradhan
Director
Child Health Division
Department of Health Services
The Ministry of Health & Population, Kathmandu
Nepal

DATE: 18th July 2008

Plan

July 24, 2008

Plan-MOHP MOU page 5 of 5

b. MOU with Institute for Medicine (IOM)

MEMORANDUM OF UNDERSTANDING

Between

THE INSTITUTE OF MEDICINE

Tribhuvan University
Kathmandu, Nepal

AND

PLAN INTERNATIONAL NEPAL

Lalitpur, Nepal
P.O. Box 8980
Ward No. 3 GA Shantabhawan
Tel. 1-55-35-580
Fax. 1-55-36-431

Plan-IOM MOU cover page (1 of 4)

PLAN INTERNATIONAL NEPAL,

Hereinafter designated and referred to as "Plan" and represented by its country Director

AND

THE INSTITUTE OF MEDICINE,

Herein after designated and referred to as "IOM" and represented by the Dean of the Institute of Medicine,

PREAMBLE:

- Considering the Government Policy of providing health services to the people through the full participation of the communities;
- Considering Plan's vision of a world in which all children realize their full potentials in societies which respect people's rights and dignities ;
- Considering Plan's mission of achieving lasting improvement in the quality of life of deprived children in developing countries through a process that unites people across cultures and adds meaning and value to their lives;
- Mindful of the Nepal national health policy of rendering quality health services accessible to the entire population through the development of Health services in the Districts and
- In order to include all stakeholders to maximize LIBON's potential impact and avoid duplication of effort

Hereby agree as follows:

ARTICLE I: PURPOSE OF THE AGREEMENT

The purpose of this agreement is to signify the intention of the parties, Plan and IOM, to collaborate in the planning and implementation of the USAID-supported "Local Innovations for Better Outcomes for Neonates" (LIBON) project. Specific modalities of collaboration will be elaborated in a forthcoming work plan to be jointly developed by the parties.

ARTICLE II: NATURE OF THE COLLABORATION

The parties intend to collaborate to pursue a reduction in neonatal mortality in Nepal through the following sub-goals:

2

- To promote social inclusion and a fact-based decision making process for the planning and resource allocation of district-based child, maternal, and neonatal programs;
- To assist the Ministry of Health and Population (MOHP) and other constituencies in the preparation and use of knowledge, policy, and investment products that will accelerate the reduction of neonatal mortality in Nepal.
- To meet the above sub-goals; the Department of Community Medicine and Family Health, Maharajgunj Campus, IOM will pursue with detail operational agreement with Plan Nepal as per the project proposal.

ARTICLE III: INTENDED AREAS OF COLLABORATION

The parties intend to pursue the goal and strategic objectives of the LIBON project through collaboration in areas of project planning, implementation and evaluation including the following:

- Participation in national-level Project Steering Committee;
- Project Baseline Survey questionnaire development and application;
- Institutionalization of Lot Quality Assurance Sampling (LQAS) at IOM project sites and interested MOHP units in the project districts;
- Shared learning involving IOM students, faculty, and LIBON staff through project internships, research, monitoring and evaluation; and documentation efforts;
- Development of Project Outputs, including technical manuals and research documents;
- Representation of project experiences and learning for integration of appropriate Maternal and Newborn Care (MNC) interventions into the MOHP Community-Based Integrated Management of Childhood Illness package.

ARTICLE IV: DURATION OF THE AGREEMENT

a) This Agreement will remain in force for a period of three (3) years, from the date of signing by both parties and renewable upon mutual consent.

b) It is automatically renewed unless either party indicates otherwise in writing three months to the expiring date.

c) This agreement may be amended or revised if both parties so agree in writing. Amendments or revisions shall take effect from the date of signing by both parties. Additionally, the terms of collaboration in the present agreement may be further elaborated by the joint creation of detailed work-plans specifying the roles of each party.

d) Either party may discontinue the agreement with a ninety-day advance written notice specifying the reasons for the termination.

3

ARTICLE V: SPECIAL PROVISIONS

a) The continued validity of the present Agreement is subject to the respect of the herein-described undertaking by both partners.

b) If the performance of the understanding by either party is delayed, hindered, prevented or is frustrated by reason of force majeure, including but not limited to: floods, fire, explosion, acts of God , acts of Government and other similar circumstances beyond the parties control which has directly prevented the party in default or breach from observance of such term, either party will be at liberty to declare force majeure without assigning any reason whatsoever, thus, making the understanding null and void without prejudice to any liability in damage or penalty whatsoever.

ARTICLE VI: SIGNATORIES

Prem Shukla
Country Director
Plan Nepal

10 Jan 08

Date: _____

Prof/Dr. Arun Syami
Dean
Institute of Medicine (IOM)

Date: _____

Witness:
Name: Bhagawan Das Shrestha
Signature:
Date: Jan 10, 2008.

Witness:
Name: Ramjee Pd. Pathak
Signature:
Date: 10th Jan, 2008

Jan 10, 2008

Plan

Plan-IOM MOU page 4 of 4

c. MOU with Nepal Family Health Program (NFHP)

MEMORANDUM OF UNDERSTANDING

Between

Plan International Nepal
P.O. Box 8980
Ward No. 3 GA Shantabhawan
Lalitpur, Nepal

Tel. 1-55-35-580
Fax. 1-55-36-431

And

Nepal Family Health Program
G.P.O. Box 1600
Kathmandu, Nepal

Tel: 1-552-4313
Fax: 1-552-6608

Plan-NFHP MOU cover page (1 of 4)

Plan International Nepal,

Hereinafter designated and referred to as "Plan" and represented by its country Director, Mr. Prem Shukla

AND

Nepal Family Health Program,

Herein after designated and referred to as "NFHP" and represented by its Chief of Party (and Project Director), Stephen R. Hodgins, MD, M.Sc. Dr.PH

PREAMBLE:

- Considering the shared commitment of the NFHP and Plan Nepal's USAID-supported Child Survival and Health Grants Program project "Local Innovations for Better Outcomes for Neonates" (LIBON) to improved maternal and child health at the community level;
- Building on prior and on-going organizational collaboration to serve this shared commitment to improved maternal and child health in communities of Nepal;
- Recognizing the mandate of NFHP to provide technical assistance to other USAID-supported partners implementing programs in the areas of RH/MCH;
- Considering Plan's intention to adapt certain maternal and child health interventions piloted by the NFHP;

Hereby agree as follows:

ARTICLE I: PURPOSE OF THE AGREEMENT

The purpose of this agreement is to signify the intention of the parties, Plan and NFHP, to exchange technical information and assistance in support of Plan's LIBON project and NFHP's Reproductive Health and Maternal and Child Health programs throughout Nepal.

ARTICLE II: NATURE OF THE COLLABORATION

The parties intend to collaborate to pursue a reduction in neonatal mortality in Nepal through Plan's implementation of the USAID-supported LIBON Project and NFHP's provision of technical assistance to the LIBON project.

ARTICLE III: NATURE OF THE COLLABORATION

NFHP intends to provide the following forms of technical support to Plan's implementation of the LIBON project:

- Technical assistance and consultation of NFHP specialists in areas relevant to the LIBON project. Such areas include, but are not limited to, Community-Based MNC; application and adaptation of the Morang Innovative Neonatal Intervention (MINI); and Monitoring and Evaluation for MCH projects;
- NFHP participation in start-up and DIP preparation processes (including DIP and CSSA workshops);
- NFHP participation in LIBON strategic review activities and coordination activities to ensure coordination of project activities with NFHP initiatives and priorities throughout the life of the project;
- NFHP support to LIBON during annual and other presentation meetings to USAID and other partners;
- Access to appropriate IEC/BCC materials and report formats;
- NFHP technical support to LIBON in the development of investment products (e.g., newsletters);
- Invitation of LIBON staff to NFHP in-country trainings and to the NFHP learning centers in Morang and Banke, and NFHP of LIBON Project training activities;

Plan and its ***LIBON Project Team*** intend to provide the following support to NFHP's programming in Nepal:

- Coordination around development and undertaking of appropriate operations research related to its CB-MNC activities in the implementation districts of Sunsari, Parsa, and Bara;
- Coordination of LIBON activities to ensure coordination with NFHP program priorities and initiatives;
- Sharing of LIBON Child Survival experiences (such as the utilization of Pregnant Women's Groups), data, and results to enrich NFHP programming efforts in Nepal.

Plan-NFHP MOU page 3 of 4

ARTICLE IV: DURATION OF THE AGREEMENT

a) The present agreement is made to last for four (4) years, from the date of signing by both parties and renewable upon mutual consent.

b) It is automatically renewed unless either party indicates otherwise in writing three months to the expiring date.

c) This agreement may be amended or revised if both parties so agree in writing. Amendments or revisions shall take effect from the date of signing by both parties. Additionally, the terms of collaboration in the present agreement may be further elaborated by the joint creation of detailed workplans specifying the roles of each party.

d) Either party may discontinue the agreement with a ninety-day advance written notice specifying the reasons for the termination.

ARTICLE V: SPECIAL PROVISIONS

a) The continued validity of the present Agreement is subject to the respect of the herein-described undertaking by both partners.

ARTICLE VI: SIGNATORIES

Prem Shukla
Country Director
Plan Nepal
Date: 7 March 2008

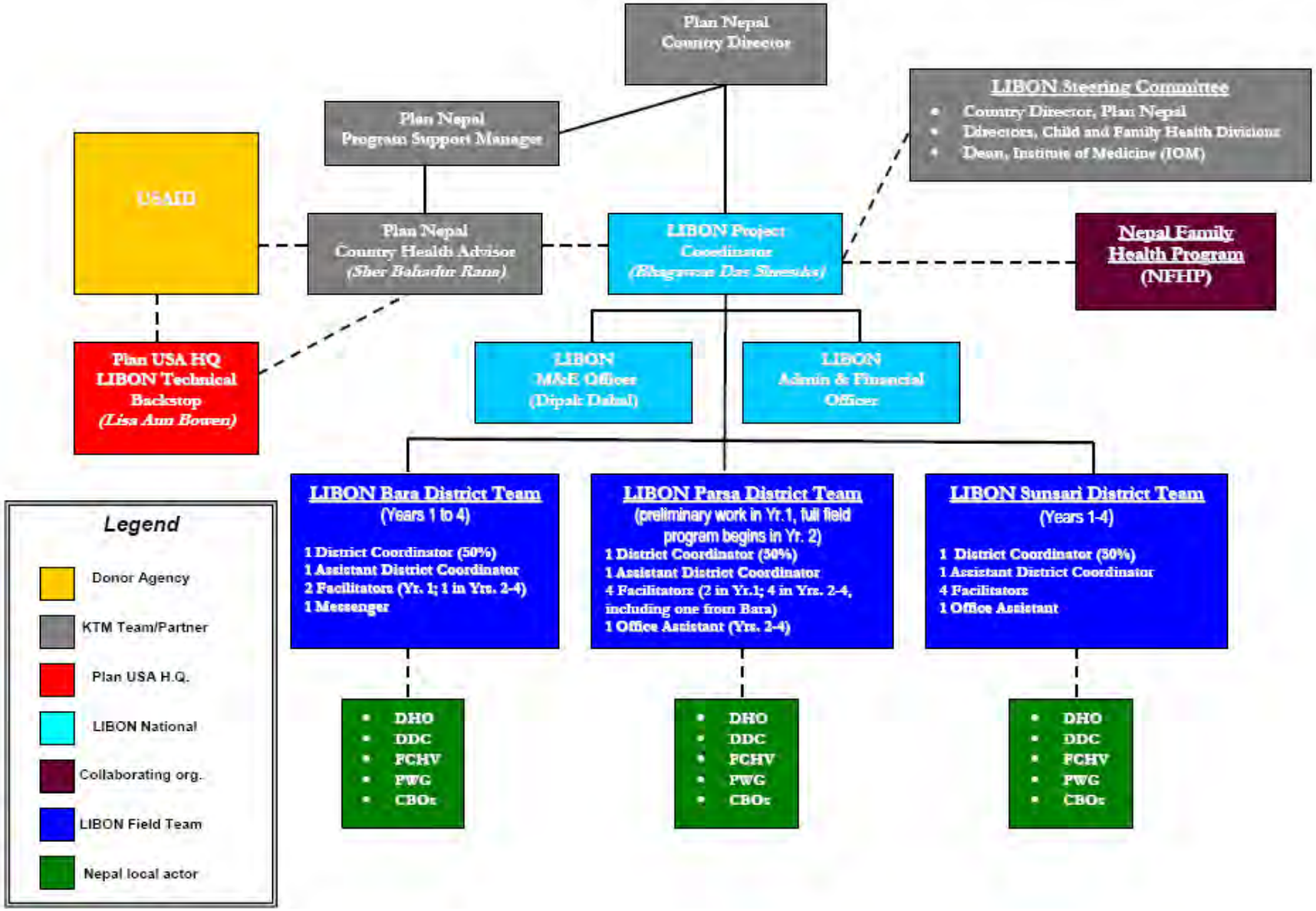
Stephen R. Hodgins, MD, M.Sc, DrPH
Chief of Party
Nepal Family Health Program
Date: 7 Mar 2008

March 7, 2008

Plan

Plan-NFHP MOU page 4 of 4

Annex 10: Plan LIBON Project Organizational Chart



Note: Plan USA HQ LIBON Teachnical Backstop is now Paige Best.

Annex 11: Resumes/CVs and Job Descriptions of Key Personnel

LIBON project Key Personnel

The following Key Personnel have changed from the proposal:

- **LIBON Project Coordinator (Bhagawan Ds Shrestha)**
- **Headquarters Backstop (Paige Best – Plan USA HIV/AIDS and Health Advisor)**

The job descriptions for the LIBON Project Coordinator and US Headquarters Backstop positions and CVs for Mr. Shrestha and Ms. Bowen are located below.

LIBON Project Coordinator (Field Coordinator)

Level of effort: full-time.
Based in: Kalaiya, Bara/Kathmandu.
Supervisor: Country Director
Receives technical support from: Country Health Advisor, Reproductive, Maternal, and Newborn Health Advisor.
Supervises: M&E Coordinator, District Coordinators, Finance and Administrative Assistant.
Functions: Lead the Project Team. Manage relationships with internal and external stakeholders and partners. Manage sub-contracts with local implementing partner(s). Lead implementation of capacity-building and operations research interventions. Lead preparation of technical and financial reports to USAID.
Qualifications: Professional in the social or health sciences preferably with a masters or doctoral degree. At least five years of experience managing primary health care programs in rural areas, preferably funded by international cooperation agencies. Prior experience with community-based child survival programs will be highly regarded. At least five years of experience leading multi-disciplinary teams. At least five years of experience coordinating health programs with national, sub-national and international institutions. Excellent communication, problem solving and team playing skills. Significant experience with planning, monitoring and evaluation tools used by international cooperation agencies. Working knowledge of USAID contractual procedures. Working knowledge on the management of sub-grants to local institutions and of consulting contracts.

Reproductive, Maternal, and Newborn Health Advisor (US Headquarters Backstop)

Level of Effort: 25%.
Based in: Washington, DC.
Supervisor: Plan Vice President for International Programs.
Functions: Provide Technical Backstopping in the design, implementation, monitoring and evaluation of quality and timely USAID funded projects. Advise in scaling up the AID CS methodology to non AID funded CS programs in Plan worldwide. Maintain contact with all CS projects to assist them in accessing state of the art technical information to promote quality implementation of CS projects. Participate in all CS USAID evaluations to assist in ensuring quality evaluation of Plan's CS projects.
Qualifications: Public Health Degrees (MPH). At least five years of public health work in developing countries and management experience in a development organization with demonstrated evidence of increasing responsibilities. Experience with USAID-funded health programs.

Curriculum Vitae
Bhagawan Das Shrestha, MPH
LIBON Project Coordinator

Professional Summary

Mr. Shrestha has twenty-three (23) years of managerial and advisory experiences on development sector management among them twelve (12) years of progressively responsible professional work experiences at international levels in programme planning, management, monitoring and evaluation of various projects in UNV/UNDP Indonesia, UNV/UNDP Bangladesh, UNICEF Nepal, Save the Children (US) in Nepal, Nepal Habitat for Humanity, Child Survival and LIBON (local innovation for better outcomes for neonates) projects of Plan Nepal.

Technical Expertise

- Planning, monitoring, evaluation and management of child survival project (budget US$ 2 million) – Plan Nepal CS project achieved all the targets planned in the proposal in final evaluation of June 2006;
- Administrated the LQAS (lot quality assurance sampling), IHFA (integrated health Facility Assessment) and CSSA (child survival sustainability assessment) framework in CS project (2001 – 2006);
- Preparation of PPA (Project Plan of Action) – rights-based and results-based programming in the favour of children, women, Dalit and disadvantaged community – experiences from UNICEF Nepal; and
- Facilitation skills on community action process (CAP) and triple A (assessment, analysis and action) process for the monitoring and record keeping of the under weight children of the community organizations;

Professional Experiences

Plan Nepal, Child Survival Project Coordinator **March 2005 - Present**

LIBON project (budget US$ 2 million) is funded by USAID by aiming to reduce neonatal mortality rates in Bara, Parsa and Sunsari districts with joint collaboration with Ministry of Health and Population (MOHP) and Institute of Medicine (IOM). My roles are:

- Monitoring of the programme in the field by frequent supportive joint visits with MOHP staff, NGOs and Plan Nepal field staff;
- Prepared annual work plan to meet the project goals and preparation of quarterly and annual reports;
- Prepared four year budget (US$ 2 million) with breakdown of the yearly and quarterly basis and submitted to Plan USNO and USAID and approved;
- Capacity building of local NGOs, CBOs and interests groups to advocate key child survival messages to reduce the neonatal deaths;
- Coordination with USAID, MOHP, IOM, Care Nepal, Nepal Family Health Programme, JSI, MINI project for the sharing of innovative experiences to reduce neonatal deaths by replicating them in LIBON project;
- Institutionalization of Plan Nepal's experiences monitoring and evaluation tools of LQAS (lot quality assurance sampling), IHFA (integrated health Facility Assessment) and CSSA (child survival sustainability assessment) framework to IOM and MOHP;

- The replication of the strategy of LIBON in other districts to reduce neonatal deaths by influencing health policy with evidence based results demonstration in the targeted districts;
- Inclusion of disadvantage and deprive children for the realization of CRC (convention on child right); and
- Overall management of project with 22 staffs in three districts

Coordinated the USAID funded Plan Nepal Child Survival XIII Cost Extension Project and US Estate Grant Child Survival Bridge Project. The major activities performed were as follows:

- Overall management of the project where I led 35 project staff in the CS project and as the same way 18 staff in the US Estate Grant Child Survival Bridge Project;
- The CS Projects reduced the maternal and infant mortality rates by 2.18 times among PWG (Pregnant Women Group) members than in non-PWG which is statistically highly significant (p-value <0.02) in Bara district of Nepal. The study was done in April 2006 with motherhood sampling technique in randomly selected 48 VDCs (50%) out of 98. The total births (live and still) were 15,244 in last two years (July 2004 – June 2005).

UNICEF Nepal, District Field Officer **2000 – 2004**

Nepal Habitat for Humanity, National Planning, Monitoring and Evaluation Coordinator Apr-Oct 2000
Child Survival Project Coordinator, Save the Children (US) Nepal 1992 - 1993
United Nations Volunteer, UNV/UNDP Bangladesh 1997 - 1998
United Nations Volunteer, UNV/UNDP, Indonesia 1994 - 1997
Ministry of Health, Nepal, Training Officer Apr – Jul 1992
Ministry of Health, Nepal, District Public Health Officer 1991 – 1992
Ministry of Health, Nepal, Health Post In-Charge 1980 – 1991

Education

Master of Public Health in Health Education (MPH-HE), Dhaka University, Bangladesh 1998 – 1999
Bachelor's Degree in Public Health (BPH), Tribhuvan University, Kathmandu, Nepal 1987 – 1989
Certificate in Medical Science (General Medicine), Tribhuvan University, Kathmandu, Nepal 1977 – 1980
School Leaving Certificate (S.L.C), SLC Board Nepal 1973 – 1975

Professional Skills

- Skill to design in local child survival and health context for Behaviour Change Strategy in Behave Framework.
- Technical backstopping on LQAS (lot quality assurance sampling) and know how to plan and monitor a project by LQAS methods;
- Operation of software programme of ProMS (programme management system) of UNICEF and PPM (project planning and monitoring) Ndugu of Plan Nepal;
- Right and result based management skills especially preparation of project plan of action (PPA), project plan of operation (PPO) and district periodic plans on logical frame work;
- Motorcycle and car driving.
- English, Indonesian, Hindi, Nepalese and Bengali reading, writing and typing
- Computer Word-star, dBase, Lotus 1-2-3, Microsoft excel (advance), Microsoft word (advance), Microsoft power point, W mail 32, Win project, Child info, internet, web page design and e-mails

- Know - How "A Perforated Bamboo Cylinder for Chlorination of well water"
- Proposal writings on Credit Revolving Fund (CRF), child survival projects, maternal health programme, people with differently able children, people living with HIV AIDS, PLHA etc.

Training/ Workshop/Seminar

- Advocacy and Lobbying Training, Plan Nepal and BBO Netherlands , November 28 – December 1, 2006;
- Designing for Behaviour Change: The BEHAVE Framework Workshop, Christian Reformed World Relief Committee (CRWRC) in collaboration with USAID, Dhaka, Bangladesh, March 27-31, 2006;
- Workshop on Appreciative Inquiry on Peace and development – Societal Transformational Change, Imagine Nepal, Kathmandu, Nepal (Resource Person: Dr. David Cooperider), September 11-12, 2005;
- Workshop on Personal times Professional Development (P2D), UNICEF Nepal, August 11-13, 2004;
- Training on humanitarian principles and rules of engagements, UNICEF Nepal, April 15-16, 2004;
- Basic Security in the Field – Staff Safety, Health, and Welfare, United Nations, October 28, 2003;
- Children In Arm Conflict (CIAC) Workshop, UNICEF Nepal, September 16 to 17, 2003;
- ProMS (Programme Manager System) training, UNICEF Region Field Office, Nepalgunj, Nepal, July 24-25, 2002;
- Workshop on Operationalizing Rights-based Programming, UNICEF Nepal, April 3-4, 2001;
- Taking Gender Equity Workshop on Mainstreaming Gender, UNICEF Nepal, November 7 - 10, 2000;
- Workshop on Technology of Participation, Group Facilitation Methods Habitat for Humanity International, New Delhi, India September 15 – 16, 2000;
- Workshop on Planning, Monitoring and Evaluation (PME) and Appreciative Planning and Action (APA), Habitat for Humanity International, New Delhi, India, September 11 – 14, 2000;
- Appreciative Inquiry Sustainability (TOT) workshop SAGUN and PACT, Kathmandu, Nepal, August 14 - 18, 2000;
- Communication and Participatory Rural Appraisal (PRA) Bangladesh Academy for Rural Development (BARD) Comilla, Bangladesh October 18 – 23, 1997; and
- Participatory Rural Appraisal (PRA) UNV/UNDP, Jakarta, Indonesia January 15, 1996.

Experiences as a Facilitator / Trainer / Resource Person

- Lot Quality Assurance Sampling Training and pre-test and data collection, Plan Nepal Programme Unit/DHO Sunsari, January 11 to 31, 2008, Itahari;
- Master Training for Trainers (MTOT) Lot Quality Assurance Sampling Training Tribhuvan University, Institute of medicine (IOM), Kathmandu, Nepal, January 3 to8, 2008;
- Lot Quality Assurance Sampling Training and pre-test and data collection Plan Nepal Rautahat / Bara Programme Unit, November 28 to December 21, 2006;
- Appreciative Inquiry (AI) for Personal and Professional Development Plan Nepal Rautahat / Bara Programme Unit, September 13-14, 2006;
- Immunization Refresher Training for Village Health Workers and MCHWs UNICEF, District Health Office Humla, Nepal July 28- August 2, 2003;

- Basic Emergency Obstetric Care (BEmOC) workshop, UNICEF and District Health Office Humla, Nepal July 24-27, 2003;
- Training to primary school teachers on facilitation skills and nutritional status for under five children in Humla for the preparation of the balance diet with locally available foods; USC Canada Humla, Nepal, September 24-26, 2002;
- Training to women's group leaders on women and children's right, USC Canada Humla, Nepal August 11-13, 2002
- Workshop on EPI Micro-Planning for Humla District for health post in-charges, DDC members, line agencies and NGOs and INGOs heads of Humla district, UNICEF and District Health Office Humla, Nepal, December 2-3, 2001; a
- Workshop on District Periodic Plan Humla 2002 – 2006 for DDC members, line agencies and NGOs and INGOs heads of Humla district UNICEF, UNDP, SNV-Nepal and District Development Committee Humla, Nepal November 22 to December 1, 2001.

Publications

- 2007 (January), A report on "Lot Quality Assurance Sampling (LQAS) Report January 2007, Rautahat, Nepal", Kalaiya, Bara, Nepal.
- 2006 (July) and 2005 (August), A report on "Lot Quality Assurance Sampling (LQAS) Report July 2006, Bara, Nepal", Kalaiya, Bara, Nepal.
- 2006 (July), A report on "Integrated Health Facility Assessment (IHFA) Report July 2006, Bara, Nepal", Kalaiya, Bara, Nepal.
- 2006 (January), A report on "Child Survival Sustainability Assessment (CSSA) Framework Report January 2006, Bara, Nepal", Kalaiya, Bara, Nepal.
- 2006 (October), An annual report "Child Survival Project" October 2005 - September 2006, Bara, Nepal", Kalaiya, Bara, Nepal.
- 1999 (June), Impact study on "Health Education Intervention Programme on Selected Aspects of Food and Nutrition Among the Secondary School Children of Dhaka", NIPSOM, Mohakhali, Dhaka –1212, Bangladesh.
- 1999 (January), A Group research on "An Educational Intervention Programme on Family Budget and Maintenance of Daily Account for the Community of Bara Chandrail. Dhamrai Thana, Dhaka, Bangladesh.
- 1998 (September), A Presentation paper on "Prevention and Control of HIV/AIDS in Bangladesh" NIPSOM, Mohakhali, Dhaka, Bangladesh.
- 1996 (August), An article on "Chlorination of Well Water with Perforated Bamboo Cylinder in Remote Village of Irian Jaya Indonesia" Published in UNV DDS Bulletin Vol. Issue 2, in Jakarta, Indonesia.
- 1990 (January), A research proposal "A Study of Difference in Nutritional Status of Under-Five Children of the Service-Holder Women and- Housewife Women".
- 1989 (June), Nuwakot District Health Profile and Five Year Planning on Elements on Primary Health Care Components (1990 –1995 B.S.).
- 1988 (June), Village Health Profile of Vijaury Village Development Committee, Dang District of Nepal.

Professional Societies and Activities in Civic, Public or International Affairs

- Founding member of Nepal Monitoring and Evaluation Forum (participated monthly on "Nepal Monitoring and Evaluation Forum Workshop" at UNICEF (ROSA) Lainchaur, Kathmandu, Nepal in June, July and August, 2000); a
- Founding Member of Nepal Public Health Association.

References

- Dr. Pierre Marie Metangmo, MD, MBA, MPH Future Generations in Franklin, West Virginia, USA as Dean of the graduate school of Applied Community Change and Conservation www.future.org E-mail pierre-marie@future.org and pmetangmo@hotmail.com
- Mr. Malcolm J. Odell, Jr., MS, PhD, Appreciative Planning and Action (APA) Specialist, Appreciative Inquiry Consulting, LLC, 4 Whitehall Rd., South Hampton, NH 03827, USA. Tel: +1 603 394 7890 and +1 603 770 6006, E-mail: macodell@adelphia.net
- Mr. Luc Chauvin, UNICEF EMOPS, Inter-Agency Unit, Geneva, Switzerland, Tel: Office: +41 22 909 5663, Mobile: + 41 79 6108486, Email: lchauvin@unicef.org
- Mr. Dirgh Raj Shrestha – Team Leader, Quality Assurance Unit, Nepal Family Health Program, P. O. Box 1600, Sanepa, Kathmandu, Nepal. Tel: +977 1 5526609 and +977 11 662716 (residence), E-mail dshrestha@nfhp.org.np
- Mr. Hari Bhakta Khoju - Executive Director, Rural Community Development Society (RUCODES), Ward No. 5, Dhulikhel Nepal, Tel: +977 11 661441 (residence) and +977 1 4481166 (office in Kathmandu), E-mail: rucodes@ntc.net.np

Curriculum Vitae
Paige L. Best, MPH
LIBON Technical Backstop, Plan USA

Professional Experience

09/07 – 02/08
Santa Fe, NM

Community Organizer
Santa Fe for Barack Obama Campaign
Canvassed door-to-door in five diverse counties. Telephoned over 3,000 registered voters in NM and TX. Organized transportation for voters in rural communities. Registered 412 first-time voters representing six different pueblos in northern NM. Provided housing and food for volunteers.

01/06 – 06/06
New York, NY

Researcher
Committee of 100
Coordinated research projects on education, trade, immigration, environmental protection, and nonproliferation between the U.S. and China.

07/05 – 12/05
South PRC

Capacity Building Trainer, China CDC and USAID VCT Program
Family Health International/China – Guangxi and Yunnan Province
Created training materials used to conduct workshops on integrating VCT with women's reproductive health services involving Chinese and Vietnamese sex workers at brothels, karaoke bars, hair salons, and truck stops.

03/05 – 06/05
South India

Consultant, Bill and Melinda Gates funded āvāhan India AIDS Initiative
Program for Appropriate Technology in Health – Karnataka, Tamil Nadu
Conducted participatory field assessments and facilitated HIV/AIDS capacity-building workshops with NGOs working with male and female sex workers, gay and transgender communities. Advised local partners on interpersonal communication activities with truck drivers, sex workers, and MSM with detailed M&E, budget, and work plans to set up community based Drop-in Centers.

11/04 – 02/05
New Delhi, India

Consultant, HIV & Development South & North East Asia
United Nations Development Program, REACH Regional Office
Assisted South Asia's Regional Coordinating Mechanism for submitting an HIV and anti-trafficking proposal to the Round 5 GFATM. Built partnerships with NGOs, PLWHA networks, and the private sector on HIV/AIDS Arts and Media programs throughout the Asia-Pacific. Supervised editorial support to research, policy, corporate social responsibility, and advocacy documents.

08/04 – 11/04
Beijing, PRC

HIV/AIDS Regional Program Manager
United Nations Development Program, People's Republic of China
Guided the planning and evaluation of national and regional HIV/AIDS projects. Coordinated partnering with UN agencies, maintained dialogue and cooperation with government counterparts, donors, NGOs, and the private sector for workplace HIV/AIDS prevention. Organized multi-sector leadership workshops with the Harvard Kennedy School of Government, National People's Congress,

State Council, Central Communist Party School, Health Bureaus, and Public Security Bureaus at central and local levels for promoting HIV/AIDS policy and legislation. Managed program budgets and provided technical support to rural women's micro-finance, and youth development proposals under MDGs.

05/04 – 07/04 External Evaluator, Education Section
Beijing, PRC **UNESCO Beijing Office**
Evaluated the first CME HIV/AIDS training program in Chinese medical colleges with Peking Union Medical College. Designed evaluation assessment materials; conducted bi-lingual interviews, facilitated meetings with stakeholders, and analyzed and reported on research data for UNAIDS, CIDA, DFID, JICA and AusAID. Secured funding, $1 million, for the 2005 AIDS training program.

11/03 – 04/04 International Cooperation Project Manager, Division of Treatment and Care
Beijing, PRC **Chinese Center for Disease Control and Prevention, NCAIDS**
Liaison with national and international partners to develop a clinical and program management M&E system for the National China CARES ARV treatment and care program. Facilitated cooperation with pharmaceuticals, multinationals, NGOs, CCM, and the UN Theme Group for China's successful Round 3 GFATM award of $98 million. Provided technical support to provincial China CDC staff, US CDC GAP, amfAR, and the Clinton Foundation for implementing a community based ARV treatment and care system.

06/03 – 11/04 Community Health Director, Positive Art Workshop
Beijing, PRC **Small Steps (China) Ltd. / Ford Foundation China**
Initiated opportunities for PLWHA to generate an income by marketing their artwork (+Art). Promoted HIV/AIDS awareness through +Art designs and products. Created links with MTV Asia and World Economic Forum to speak out and reduce stigma and discrimination. Expanded +Art Workshop into communities for encouraging household palliative care and social support.

09/02 – 05/03 Health Services Manager
San Francisco, CA **Kai Ming Inc.**
Managed and trained 60 teachers, staff and parent volunteers; assisted in directing community health workshops with other Bay Area non-profits. Monitored budgets and monthly medical, dental, mental health, and nutritional services for low-income children and their families. Contributed to the design of an operational monitoring and fiscal plan for Federal and State funding for Head Start programs.

10/01 – 06/02 Epidemiologist, Division of Communicable Disease Control
Cairo, Egypt **World Health Organization, Eastern Mediterranean Regional Office**
Monitored and analyzed epidemiological data and translated it into key messages and advocacy materials for emergency relief in Afghanistan and Sudan. Designed and edited the 2001 Annual Report. Fostered cooperation with industries, civil society, and the Arab media for *Roll Back Malaria* and *STOP TB* Initiatives.

09/99 – 03/02 Teaching Assistant, Department of Epidemiology
Baltimore, MD **Johns Hopkins Bloomberg School of Public Health**
Designed and evaluated midterm and final exams for the graduate level HIV and AIDS epidemiology course. Developed qualitative and quantitative research tools for operations and baseline formative research with the USAID/BASICS *Women and Malaria* Initiative, and Save the Children *Saving Newborn Lives* Initiative. Database administrator for the phase III clinical trial of the *pneumococcal* conjugate vaccine study.

08/99 – 08/01 Adjunct Faculty Instructor, Center for American Indian Alaska Native Health
Bismarck, ND **United Tribes Technical College**
Taught summer courses: Introduction to Community Health and Program Implementation and Evaluation. Helped to secure funding for Injury Prevention programs with other Tribal Colleges.

11/98 – 08/99 Research Associate, Indian Health Service
Rockville, MD **United States Public Health Service**
Monitored State and Tribal Injury Prevention policies with Tribal legislatures. Wrote and edited reports on Native American health to US Congress. Responded to queries and requests. Established communications with Indian Gaming staff, BIA officers, lobbyists, Tribal lawyers, and Tribal members. Mobilized community advocacy efforts in support of Tribal initiatives through use of public hearings and focus groups in order to strengthen linkages with Tribal health departments, Tribal colleges, Federal and State agencies, Schools of Public Health, and non-profits.

06/95 – 08/95 Intern, Dzilth-Na-O-Dith-Hle Health Center
Bloomfield, NM **United States Public Health Service/Indian Health Service**
Designed and implemented a diabetes prevention and management program at IHS clinics for youth and elderly living on the Navajo Indian reservation. Assisted midwives and public health nurses on home visits to counsel and encourage mothers on breastfeeding and nutrition. Fostered the public private partnership with Native Wings and Nike for after-school cross-country running/nutrition activities for Navajo youth.

10/93 – 05/97 Laboratory Technician, Department of Biology
Albuquerque, NM **University of New Mexico**
Studied the parasite/host immune response relationship with schistosomiasis (*S.mansoni*) in collaboration with parasitologists from Kenya and Tanzania. Performed PCR and other molecular lab tests for species discrimination. Monitored freshwater snail production. Conducted literature reviews and edited research proposals, IRB protocols, articles and abstracts.

Education

1998-1999 Washington, DC	George Washington University School of Public Health and Health Services **MPH – International Health Promotion, summa cum laude** Masters Thesis: National Trends in Assault Injuries Among American Indian and Alaska Native Youth, 1987-1996
1993-1997 Albuquerque, NM	University of New Mexico **BS – Anthropology (major) Biology (minor), magna cum laude** Honors Thesis: Retrospective Cohort Study of Ethnic Factors Associated with Emergency Department Visits by Children with Asthma

Languages

English and Mandarin (bilingual), Spanish (intermediate), Arabic (basic)

Advanced Computer Skills

Proficient: MS Office programs, FoxPro, EPI Info, Atlas.ti, SPSS, STATA

Attachment A: Epidemiological and Population Statistics and Health Facilities and Staffing by District

Epidemiological and Population Statistics:
Population characteristics, health status and health service utilization in the 3 LIBON target districts

DISTRICT	Location	Total Population (Target 2007/08)	Population aged 0-11 months (Target 2007/08)	Population aged 12-23 months (Target 2007/08)	Population aged 24-59 months (Target 2007/08)	Women of reproductive age (WRA) (15-49 years) (Target 2007/08)	Annual number of expected pregnancies (Target 2007/08)	% of live births reported as smaller than average by their mothers, 2001	% male population literate	% female population literate	% female population listening to radio every day, 2001	% of WRA who alone or jointly decide on her own health	Number of Village Development Committees	Number of municipalities	Number of sub-districts
SUNSARI	Eastern Terai	733,919	18,837	19,286	56,785	139,344	27,869	18	71	50	46	28	49	3	12
BARA	Central Terai	652,286	17,680	18,616	55,291	125,053	23,538	14	55	29	16	26	98	1	15
PARSA	Central Terai	580,572	15,697	16,617	49,533	110,422	20,742	14	55	28	16	26	82	1	12
TOTAL		1,966,777	52,214	54,519	161,609	374,819	72,149						**229**	**5**	**39**

Sources: Plan, 2006; DHS, 2001 and **projected for 2007/08**

DISTRICT	Under-five mortality rate, 2001	Infant mortality rate, 2001	Neonatal mortality rate, 2001	% of birth deliveries by trained health worker, 2004	% of pregnancies with at least one prenatal care visit, 2004	% of pregnancies administered two or more tetanus toxoid, 2001	% of birth deliveries using a clean birth kit, 2001	% of postpartum women receiving postnatal checkup within 2 days of delivery, 2001	% of newborns initiating breastfeeding within 1 hour after birth, 2001	% of post-partum women receiving high-dose vitamin A within 6 weeks of birth, 2004	Number of Primary Health Centers, Health Posts and Sub-posts	Number of MOHP staff	Number of Female Community Health Volunteers
SUNSARI	108	79	50	22	78	64	12	20	20	40	52	180	1,244
BARA	112	79	49	13	63	57	11	61	8	50	98	322	940
PARSA	112	70	26	17	63	57	11	61	8	45	83	273	796
TOTAL											**233**	**775**	**2,980**

Sources: DHS, 2001, 2004; 2007/08 Annual Report of the MOH; An Analytical Report on National Survey of Female Community Health Volunteers of Nepal.
(The 2006 DHS Preliminary Report either does not have information on these indicators or does not disaggregate it by relevant sub-national area; therefore, data from the 2001 DHS have been used.)

Health Facility Location and Staffing in 3 Target Districts of LIBON Project

Sunsari District Health Facility Information

SN	VDC name	S/HP, PHC	Ilaka (Sub-district)	Doctor	HA	Staff Nurse	ANM	AHW	VHW	MCHW	Admin Staff	Peon	Total
1	Barahachhetra	PHC	Chatara	1	1	2	2	1	1		1	1	10
2	Bishnupaduka	SHP	Chatara					1	1	1			3
3	Mahendranagar	SHP	Chatara					1	1	1			3
4	Babiya	SHP	Inaruwa					1	1	1			3
5	Bhokraha	SHP	Inaruwa					1	1	1			3
6	Dumaraha	SHP	Inaruwa					1	1	1			3
7	Madhesa	SHP	Inaruwa					1	1	1			3
8	Inaruwa N.P.	HP	Inaruwa NP		1		1	2	1		1	1	7
9	Haripur	SHP	Madhuwan					1	1	1			3
10	Laukahi	SHP	Madhuwan					1	1	1			3
11	Madhuwan	PHC	Madhuwan	1	1	2	2	1	1		1	1	10
12	PaschimKasuha	SHP	Madhuwan					1	1	1			3
13	Sripurjabdi	SHP	Madhuwan					1	1	1			3
14	Prakashpur	HP	Prakashpur		1		1	2	1		1	1	7
15	Dewanganj	HP	Dewanganj		1		1	2	1		1	1	7
16	Ghuskee	SHP	Dewanganj					1	1	1			3
17	Kaptanganj	SHP	Dewanganj					1	1	1			3
18	Sahebganj	SHP	Dewanganj					1	1	1			3
19	Basantapur	SHP	Harinagar					1	1	1			3
20	Harinagar	PHC	Harinagar	1	1	2	2	1	1		1	1	10
21	Madhyeharsahi	SHP	Harinagar					1	1	1			3
22	RamganjSenuwari	SHP	Harinagar					1	1	1			3
23	Amaduwa	SHP	Sitagunj					1	1	1			3
24	Amahibelaha	SHP	Sitagunj					1	1	1			3
25	Chimdi	SHP	Sitagunj					1	1	1			3

Sunsari District Health Facility Information

SN	VDC name	S/HP, PHC	Ilaka (Sub-district)	Doctor	HA	Staff Nurse	ANM	AHW	VHW	MCHW	Admin Staff	Peon	Total
26	Purbakushaha	SHP	Sitagunj					1	1	1			3
27	RamganjBelgachhi	HP	Sitagunj		1		1	2	1		1	1	7
28	Chadwela	SHP	Madhelee					1	1	1			3
29	Duhabi	SHP	Madhelee					1	1	1			3
30	Madhelee	HP	Madhelee		1		1	2	1		1	1	7
31	Simariya	SHP	Madhelee					1	1	1			3
32	Sonapur	SHP	Madhelee					1	1	1			3
33	Chhitaha	SHP	Satterjhora					1	1	1			3
34	Santerjhora	PHC	Satterjhora	1	1	2	2	1	1		1	1	10
35	Aurabarni	SHP	Satterjhora					1	1	1			3
36	Bhaluwa	SHP	Satterjhora					1	1	1			3
37	Tanamuna	SHP	Satterjhora					1	1	1			3
38	Gautampur	SHP	Bhutaha					1	1	1			3
39	Jalpapur	SHP	Bhutaha					1	1	1			3
40	Narshinhatappu	SHP	Bhutaha					1	1	1			3
41	RamnagarBhutaha	HP	Bhutaha		1		1	2	1		1	1	7
42	Bakalauri	HP	Bakalauri		1		1	2	1		1	1	7
43	BhadgauSinawari	SHP	Bakalauri					1	1	1			3
44	Bharaul	SHP	Bakalauri					1	1	1			3
45	Pakali	SHP	Bakalauri					1	1	1			3
46	Singiya	SHP	Bakalauri					1	1	1			3
47	Dharan N.P.	SHP	Dharan NP					1	1	1			3
48	Aekamba	SHP	Itahari					1	1	1			3
49	Hanshposha	SHP	Itahari					1	1	1			3
50	Khanar	SHP	Itahari					1	1	1			3
51	Panchakanya	SHP	Itahari					1	1	1			3
52	Itahari N.P.	PHC	Itahari NP	1	1	2	2	1	1		1	1	10
			Total	**5**	**12**	**10**	**17**	**59**	**52**	**40**	**12**	**12**	**219**

Parsa District Health Facility Information

SN	VDC name	S/HP, PHC	Ilaka (Sub-district)	Doctor	HA	Staff Nurse	ANM	AHW	VHW	MCHW	Admin Staff	Peon	Total
1	Bagahi	PHC	Bagahi	1	1	2	2	1	1		1	1	10
2	Basadilwa	SHP	Bagahi					1	1	1			3
3	BelwaParsouni	SHP	Bagahi					1	1	1			3
4	Birwaguthi	SHP	Bagahi					1	1	1			3
5	Chorni	SHP	Bagahi					1	1	1			3
6	LalParsa	SHP	Bagahi					1	1	1			3
7	Bagbana	SHP	Bageshwori					1	1	1			3
8	BageshwariTirtrona	SHP	Bageshwori					1	1	1			3
9	BahauriPidari	SHP	Bageshwori					1	1	1			3
10	Harpur	SHP	Bageshwori					1	1	1			3
11	MadhubanMathaul	SHP	Bageshwori					1	1	1			3
12	Pancharukhi	SHP	Bageshwori					1	1	1			3
13	SakhuwaPrasauni	SHP	Bageshwori					1	1	1			3
14	GhoddaudaPipra	SHP	Bhikhampur					1	1	1			3
15	JagaranathpurSira	SHP	Bhikhampur					1	1	1			3
16	Janakitola	SHP	Bhikhampur					1	1	1			3
17	Bhikhampur	PHC	Bhikhampur	1	1	2	2	1	1		1	1	10
18	Bhawanipur	SHP	Birgunj					1	1	1			3
19	LipaniBirta	SHP	Birgunj					1	1	1			3
20	Maniyari	SHP	Birgunj					1	1	1			3
21	ParsauniBirta	SHP	Birgunj					1	1	1			3
22	Birgunj U.M.N.P.	SHP	Birgunj NP					1	1	1			3
23	Bahuarbatatha	SHP	Bisrampur					1	1	1			3
24	BeriyaBirta(Wa.Pu.)	SHP	Bisrampur					1	1	1			3
25	Bisrampur	HP	Bisrampur		1		1	2	1		1	1	7
26	Gamhariya	SHP	Bisrampur					1	1	1			3
27	Nagardaha	SHP	Bisrampur					1	1	1			3
28	Ramnagari	SHP	Bisrampur					1	1	1			3

Parsa District Health Facility Information

SN	VDC name	S/HP, PHC	Ilaka (Sub-district)	Doctor	HA	Staff Nurse	ANM	AHW	VHW	MCHW	Admin Staff	Peon	Total
29	UdayapurDhurmi	SHP	Bisrampur					1	1	1			3
30	Vauratar	SHP	Bisrampur					1	1	1			3
31	Bhisawa	SHP	Langadi					1	1	1			3
32	Dhobini	SHP	Langadi					1	1	1			3
33	Hariharpur	SHP	Langadi					1	1	1			3
34	Jaimangalapur	SHP	Langadi					1	1	1			3
35	Langadi	HP	Langadi		1		1	2	1		1	1	7
36	Mirjapur	SHP	Langadi					1	1	1			3
37	Mudali	SHP	Langadi					1	1	1			3
38	Samjhauta	SHP	Langadi					1	1	1			3
39	TulasiBarba	SHP	Langadi					1	1	1			3
40	Auraha	SHP	Nichuta					1	1	1			3
41	Dewarwana	SHP	Nichuta					1	1	1			3
42	Gadi	SHP	Nichuta					1	1	1			3
43	KauwaBanKataiya	SHP	Nichuta					1	1	1			3
44	Lakhanpur	SHP	Nichuta					1	1	1			3
45	Mahuwan	SHP	Nichuta					1	1	1			3
46	Masihani	SHP	Nichuta					1	1	1			3
47	Nichuta	HP	Nichuta		1		1	2	1		1	1	7
48	Sonbarsa	SHP	Nichuta					1	1	1			3
49	PartewaSugauli	SHP	Nichuta					1	1	1			3
50	Bhedihari	SHP	Pakaha					1	1	1			3
51	Biranchibarba	SHP	Pakaha					1	1	1			3
52	Dhore	SHP	Pakaha					1	1	1			3
53	Lahawarthakari	SHP	Pakaha					1	1	1			3
54	Mainpur(Pakaha)	SHP	Pakaha					1	1	1			3
55	ParsauniBhatha	SHP	Pakaha					1	1	1			3
56	Prasurampur	SHP	Pakaha					1	1	1			3
57	Sabaithawa	SHP	Pakaha					1	1	1			3

Parsa District Health Facility Information

SN	VDC name	S/HP, PHC	Ilaka (Sub-district)	Doctor	HA	Staff Nurse	ANM	AHW	VHW	MCHW	Admin Staff	Peon	Total
58	Surjaha	SHP	Pakaha					1	1	1			3
59	Basantpur	SHP	Pokhariya					1	1	1			3
60	BeriyaBirta	SHP	Pokhariya					1	1	1			3
61	Govindapur	SHP	Pokhariya					1	1	1			3
62	HariharpurBirta	SHP	Pokhariya					1	1	1			3
63	Pokhariya	PHC	Pokhariya	1	1	2	2	1	1		1	1	10
64	Shivabarba	SHP	Pokhariya					1	1	1			3
65	Sreesiya(Nau.Ta.Ja.)	SHP	Pokhariya					1	1	1			3
66	Bijbaniya	SHP	Sedhawa					1	1	1			3
67	Jeetpur	SHP	Sedhawa					1	1	1			3
68	Mahadevpatti	SHP	Sedhawa					1	1	1			3
69	Pidariguthi	SHP	Sedhawa					1	1	1			3
70	SankarSaraiya	SHP	Sedhawa					1	1	1			3
71	Sedhawa	HP	Sedhawa		1		1	2	1		1	1	7
72	Subarnapur	SHP	Sedhawa					1	1	1			3
73	Supauli	SHP	Sedhawa					1	1	1			3
74	Alau	SHP	Sirsiya					1	1	1			3
75	Amarpatti	SHP	Sirsiya					1	1	1			3
76	Bindabasini	SHP	Sirsiya					1	1	1			3
77	Harpatagunj	SHP	Sirsiya					1	1	1			3
78	JhouwaGuthi	SHP	Sirsiya					1	1	1			3
79	Ramgadhawa	SHP	Sirsiya					1	1	1			3
80	SirsiyaKhalwatola	SHP	Sirsiya					1	1	1			3
81	SugauliBirta	SHP	Sirsiya					1	1	1			3
82	NirmalBasti	SHP	Thori					1	1	1			3
83	Thori	HP	Thori		1		1	2	1		1	1	7
			Total	**3**	**8**	**6**	**11**	**88**	**83**	**75**	**8**	**8**	**290**

Bara District Health Facility Information

SN	VDC name	S/HP, PHC	Ilaka (Sub-district)	Doctor	HA	Staff Nurse	ANM	AHW	VHW	MCHW	Admin Staff	Peon	Total
1	Nijgadh	PHC	Nijgadh	1	1	2	2	1	1		1	1	10
2	Ratanpuri	SHP	Nijgadh					1	1	1			3
3	Bharatgunj	SHP	Nijgadh					1	1	1			3
4	Simara	PHC	Simara	1	1	2	2	1	1		1	1	10
5	Fattepur	SHP	Simara					1	1	1			3
6	Amlekhgunj	SHP	Simara					1	1	1			3
7	Dumarwana	SHP	Simara					1	1	1			3
8	Jeetpur	SHP	Simara					1	1	1			3
9	Chhatapipra	SHP	Simara					1	1	1			3
10	Rampurwa	HP	Rampurwa		1		1	2	1		1	1	7
11	Sapahi	SHP	Rampurwa					1	1	1			3
12	Kolhavi	SHP	Rampurwa					1	1	1			3
13	Bachhanpurwa	SHP	Rampurwa					1	1	1			3
14	Amaw	SHP	Rampurwa					1	1	1			3
15	Sihasani	SHP	Rampurwa					1	1	1			3
16	Bisunpurwa	SHP	Rampurwa					1	1	1			3
17	Haraiya	HP	Haraiya		1		1	2	1		1	1	7
18	Parsauna	SHP	Haraiya					1	1	1			3
19	Kakadi	SHP	Haraiya					1	1	1			3
20	Tetariya	SHP	Haraiya					1	1	1			3
21	Sihorwa	SHP	Haraiya					1	1	1			3
22	Karaiya	SHP	Haraiya					1	1	1			3
23	Ganjabhawanipur	PHC	Ganjabhawanipur	1	1	2	2	1	1		1	1	10
24	Bagwan	SHP	Ganjabhawanipur					1	1	1			3
25	Balirampur	SHP	Ganjabhawanipur					1	1	1			3
26	Kabahijabdi	SHP	Ganjabhawanipur					1	1	1			3
27	Madhurijabdi	SHP	Ganjabhawanipur					1	1	1			3
28	Dahiyar	SHP	Ganjabhawanipur					1	1	1			3

Bara District Health Facility Information

SN	VDC name	S/HP, PHC	Ilaka (Sub-district)	Doctor	HA	Staff Nurse	ANM	AHW	VHW	MCHW	Admin Staff	Peon	Total
29	Bariyapur	HP	Bariyapur		1		1	2	1		1	1	7
30	Babuain	SHP	Bariyapur					1	1	1			3
31	Poprabirta	SHP	Bariyapur					1	1	1			3
32	Majhariya	SHP	Bariyapur					1	1	1			3
33	Telkuwa	SHP	Bariyapur					1	1	1			3
34	Piparpati Jabdi	SHP	Bariyapur					1	1	1			3
35	Rauwahi	SHP	Bariyapur					1	1	1			3
36	Patharhatti	SHP	Bariyapur					1	1	1			3
37	Gadahal	HP	Gadahal		1		1	2	1		1	1	7
38	Umjan	SHP	Gadahal					1	1	1			3
39	Amarpatti	SHP	Gadahal					1	1	1			3
40	Narahi	SHP	Gadahal					1	1	1			3
41	Khopuwa	SHP	Gadahal					1	1	1			3
42	P. Basatpur	SHP	Gadahal					1	1	1			3
43	Pathera	SHP	Gadahal					1	1	1			3
44	Simraungadh	HP	Simraungadh		1		1	2	1		1	1	7
45	Bisunpur	SHP	Simraungadh					1	1	1			3
46	Shreenagar Bairiya	SHP	Simraungadh					1	1	1			3
47	P. Parchauta	SHP	Simraungadh					1	1	1			3
48	Chi. Pakadiya	SHP	Simraungadh					1	1	1			3
49	Beldari	SHP	Simraungadh					1	1	1			3
50	Benauli	SHP	Simraungadh					1	1	1			3
51	Amritgunj	SHP	Simraungadh					1	1	1			3
52	Uchidi	SHP	Simraungadh					1	1	1			3
53	Hariharpur	SHP	Simraungadh					1	1	1			3
54	Hardiya	HP	Hardiya		1		1	2	1		1	1	7
55	B. Phulbariya	SHP	Hardiya					1	1	1			3
56	Parsurampur	SHP	Hardiya					1	1	1			3
57	Hardiya (Kabahigoad)	SHP	Hardiya					1	1	1			3

Bara District Health Facility Information

SN	VDC name	S/HP, PHC	Ilaka (Sub-district)	Doctor	HA	Staff Nurse	ANM	AHW	VHW	MCHW	Admin Staff	Peon	Total
58	D. Jhitkaiya	SHP	Hardiya					1	1	1			3
59	Basatpur	SHP	Hardiya					1	1	1			3
60	Pipradhi	SHP	Hardiya					1	1	1			3
61	Bagahi	SHP	Hardiya					1	1	1			3
62	Chiutaha	HP	Chiutaha		1		1	2	1		1	1	7
63	Inarwamal	SHP	Chiutaha					1	1	1			3
64	Kuduwa	SHP	Chiutaha					1	1	1			3
65	Kotwali	SHP	Chiutaha					1	1	1			3
66	Bhagwanpur	SHP	Chiutaha					1	1	1			3
67	Paterwa	SHP	Chiutaha					1	1	1			3
68	Tedakatti	SHP	Chiutaha					1	1	1			3
69	Dewapur	SHP	Chiutaha					1	1	1			3
70	Kacharwa	SHP	Chiutaha					1	1	1			3
71	Parsauni	HP	Parsauni		1		1	2	1		1	1	7
72	Bahuari	SHP	Parsauni					1	1	1			3
73	Bhaluhi Bharba.	SHP	Parsauni					1	1	1			3
74	Khutuwa	SHP	Parsauni					1	1	1			3
75	Motisar	SHP	Parsauni					1	1	1			3
76	Raghunathpur	SHP	Parsauni					1	1	1			3
77	Sishaniya	SHP	Parsauni					1	1	1			3
78	Rampurtokni	HP	Rampurtokni		1		1	2	1		1	1	7
79	Buniyad	SHP	Rampurtokni					1	1	1			3
80	Prastoka	SHP	Rampurtokni					1	1	1			3
81	Inarwasira	SHP	Rampurtokni					1	1	1			3
82	Banjariya	SHP	Rampurtokni					1	1	1			3
83	Bhatauda	SHP	Rampurtokni					1	1	1			3
84	Lipanimal	SHP	Rampurtokni					1	1	1			3
85	Pheta	HP	Pheta		1		1	2	1		1	1	7
86	Dharamnagar	SHP	Pheta					1	1	1			3

Bara District Health Facility Information

SN	VDC name	S/HP, PHC	Ilaka (Sub-district)	Doctor	HA	Staff Nurse	ANM	AHW	VHW	MCHW	Admin Staff	Peon	Total
87	Itiyahi	SHP	Pheta					1	1	1			3
88	Matiarwa	SHP	Pheta					1	1	1			3
89	Purainiya	SHP	Pheta					1	1	1			3
90	Bisrampur	SHP	Pheta					1	1	1			3
91	Batara	SHP	Pheta					1	1	1			3
92	Chhatwa	SHP	Pheta					1	1	1			3
93	Barainiya	SHP	Pheta					1	1	1			3
94	Bhodaha	HP	Bhodaha		1		1	2	1		1	1	7
95	Dohari	SHP	Bhodaha					1	1	1			3
96	Manarwa	SHP	Bhodaha					1	1	1			3
97	Utterjhitkaiya	SHP	Bhodaha					1	1	1			3
98	Maheshpur	SHP	Bhodaha					1	1	1			3
			Total	**3**	**14**	**6**	**17**	**109**	**98**	**84**	**14**	**14**	**359**

Note: Kalaiya Municipality has a District Hospital and there is no PHC/HP/SHP. Bara district has 98 VDCs and one Municipality

Attachment B: FCHV Incentives to Implement CB-NCP according to MoHP: Currently Unfunded

	YEAR 2 (2008/09)						YEAR 3 (2009/10)					
	# Units	Unit	Cost	Duration	Duration Type	Total	# Units	Unit	Cost	Duration	Duration Type	Total
FCHV/VHW/MCHW incentive												
FCHV incentive (Cash & kinds) - Sunsari district												
incentive - FCHV	11,399	/people	$ 5	1	/time	$ 56,995	23,310	/people	$ 5	1	/days	$116,550
color coded thermometer	1,244	/people	$ 1	1	/time	$ 1,244	124	/people	$ 1	1	/time	$ 124
weighing scale (color coded)	1,244	/people	$ 13	1	/time	$ 16,172	124	/people	$ 13	1	/time	$ 1,612
clean delivery kits	9,005	/people	$ 0.4	1	/time	$ 3,602	18,415	/people	$ 0.4	1	/time	$ 7,366
suction with bulb/tube & mask	1,244	/people	$ 1.0	1	/time	$ 1,244	124	/people	$ 1	1	/time	$ 124
self inflating bag and mask	1,244	/people	$19.5	1	/time	$ 24,258	124	/people	19.5	1	/time	$ 2,418
injection gentamicin 20 mg at peripheral health facilities	1,311	/people	$ 1.0	1	/time	$ 1,311	2,681	/people	$ 1.0	1	/time	$ 2,681
job aids for ENC, PNC mgmt of birth asphyxia, sepsis, LBW	75	/people	$ 5.0	7	/subject	$ 2,625						
forms and registers (birth, treatment, referral call)	1,244	/people	$ 3.0	3	/set	$ 11,196	1,244	/people	$ 3.0	3	/set	$ 11,196
training materials - MCHW	40	/people	$ 3.0	2	/set	$ 240						
insulin syringe for gentamicin	1,311	/people	$ 0.5	1	/set	$ 655	2,681	/people	$ 0.5	1	/set	$ 1,340
gv 1%	1,244	/people	$ 0.1	4	/set	$ 498	1,244	/people	$ 0.1	4	/set	$ 498
needle to puncture pustule	1,244	/people	$ 0.2	1	/set	$ 249	1,244	/people	$ 0.2	1	/set	$ 249
tetracycline eye ointment	1,244	/people	$ 1.0	3	/set	$ 3,732	1,244	/people	$ 1.0	3	/set	$ 3,732
tin box, soap with case, towel, cotton	1,244	/people	$ 9	1	/time	$ 11,196						
umbrella	1,244	/people	$ 3	1	/time	$ 3,732						$ -
torch with battery	1,244	/people	$ 6	1	/time	$ 7,464						$ -
uniform	1,244	/people	$ 15	1	/time	$ 18,660						
ID card	1,244	/people	$ 1	1	/time	$ 1,244						
Sub-total (FCHV incentive (Cash & kinds) - Sunsari district)						**$166,317**						**$147,890**

	YEAR 2 (2008/09)						YEAR 3 (2009/10)					
	# Units	Unit	Cost	Duration	Duration Type	Total	# Units	Unit	Cost	Duration	Duration Type	Total
FCHV incentive (Cash & kinds) - Parsa district												
incentive - FCHV	8,484	/people	$ 5	1	/time	$ 42,420	17,349	/people	$ 5	1	/days	$ 86,745
color coded thermometer	796	/people	$ 1	1	/time	$ 796	80	/people	$ 1	1	/time	$ 80
weighing scale (color coded)	796	/people	$ 13	1	/time	$ 10,348	80	/people	$ 13	1	/time	$ 1,040
clean delivery kits	6,702	/people	$ 0.4	1	/time	$ 2,681	13,706	/people	$ 0.4	1	/time	$ 5,482
suction with bulb/tube & mask	796	/people	$ 1.0	1	/time	$ 796	80	/people	$ 1	1	/time	$ 80
self inflating bag and mask	796	/people	$19.5	1	/time	$ 15,522	80	/people	$ 19.5	1	/time	$ 1,560
injection gentamicin 20 mg at peripheral health facilities	976	/people	$ 1.0	1	/time	$ 976	1,995	/people	$ 1.0	1	/time	$ 1,995
job aids for ENC, PNC mgmt of birth asphyxia, sepsis, LBW	65	/people	$ 5.0	7	/subject	$ 2,275						
forms and registers (birth, treatment, referral call)	796	/people	$ 3.0	3	/set	$ 7,164	796	/people	$ 3.0	3	/set	$ 7,164
training materials - MCHW	75	/people	$ 3.0	2	/set	$ 450						
insulin syringe for gentamicin	976	/people	$ 0.5	1	/set	$ 488	1,995	/people	$ 0.5	1	/set	$ 998
gv 1%	796	/people	$ 0.1	4	/set	$ 318	796	/people	$ 0.1	4	/set	$ 318
needle to puncture pustule	796	/people	$ 0.2	1	/set	$ 159	796	/people	$ 0.2	1	/set	$ 159
tetracycline eye ointment	796	/people	$ 1.0	3	/set	$ 2,388	796	/people	$ 1.0	3	/set	$ 2,388
tin box, soap with case, towel, cotton	796	/people	$ 9	1	/time	$ 7,164						
umbrella	796	/people	$ 3	1	/time	$ 2,388						
torch with battery	796	/people	$ 6	1	/time	$ 4,776						
uniform	796	/people	$ 15	1	/time	$ 11,940						
ID card	796	/people	$ 1	1	/time	$ 796						
Sub-total (FCHV incentive (Cash & kinds) - Parsa district)						**$113,845**						**$108,009**
VHW incentive (kinds) - Sunsari district												
bicycle	52	/people	$ 67	1	/time	$ 3,484						
raincoat	52	/people	$ 18	1	/time	$ 936						
torch with battery	52	/people	$ 6	1	/time	$ 312						
bag	52	/people	$ 7	1	/time	$ 364						
Sub-total (VHW incentive (kinds) - Sunsari district)						**$ 5,096**						**$ -**

	YEAR 2 (2008/09)						YEAR 3 (2009/10)					
	# Units	Unit	Cost	Duration	Duration Type	Total	# Units	Unit	Cost	Duration	Duration Type	Total
MCHW incentive (kinds) - Sunsari district												
bicycle	40	/people	$ 67	1	/time	$ 2,680						
raincoat	40	/people	$ 18	1	/time	$ 720						
torch with battery	40	/people	$ 6	1	/time	$ 240						
bag	40	/people	$ 7	1	/time	$ 280						
Sub-total (MCHW incentive (kinds) - Sunsari district)						**$ 3,920**						**$ -**
VHW incentive (kinds) - Parsa district												
bicycle	83	/people	$ 67	1	/time	$ 5,561						
raincoat	83	/people	$ 18	1	/time	$ 1,494						
torch with battery	83	/people	$ 6	1	/time	$ 498						
bag	83	/people	$ 7	1	/time	$ 581						
Sub-total (VHW incentive (kinds) - Parsa district)						**$ 8,134**						**$ -**
MCHW incentive (kinds) - Parsa district												
bicycle	75	/people	$ 67	1	/time	$ 5,025						
raincoat	75	/people	$ 18	1	/time	$ 1,350						
torch with battery	75	/people	$ 6	1	/time	$ 450						
bag	75	/people	$ 7	1	/time	$ 525						
Sub-total (MCHW incentive (kinds) - Parsa district)						**$ 7,350**						**$ -**
TOTAL FCHV/VWH/MCHW incentive						**$304,662**						**$255,899**

Note: exchange rate @ Nrs 67 / $ 1

	YEAR 4 (2010/11)						Total
	# Units	Unit	Cost	Duration	Duration Type	Total	Grand Total
FCHV/VHW/MCHW incentive							
FCHV incentive (Cash & kinds) - Sunsari district							
incentive - FCHV	23,834	/people	$ 5	1	/days	$119,170	$292,715
color coded thermometer	124	/people	$ 1	1	/time	$ 124	$ 1,492
weighing scale (color coded)	124	/people	$ 13	1	/time	$ 1,612	$ 19,396
clean delivery kits	18,829	/people	$ 0.4	1	/time	$ 7,532	$ 18,500
suction with bulb/tube & mask	124	/people	$ 1	1	/time	$ 124	$ 1,492
self inflating bag and mask	124	/people	$ 19.5	1	/time	$ 2,418	$ 29,094
injection gentamicin 20 mg at peripheral health facilities	2,741	/people	$ 1.0	1	/time	$ 2,741	$ 6,733
job aids for ENC, PNC mgmt of birth asphyxia, sepsis, LBW							$ 2,625
forms and registers (birth, treatment, referral call)	1,244	/people	$ 3.0	3	/set	$ 11,196	$ 33,588
training materials - MCHW							$ 240
insulin syringe for gentamicin	2,741	/people	$ 0.5	1	/set	$ 1,370	$ 3,365
gv 1%	1,244	/people	$ 0.1	4	/set	$ 498	$ 1,494
Needle to puncture pustule	1,244	/people	$ 0.2	1	/set	$ 249	$ 747
tetracycline eye ointment	1,244	/people	$ 1.0	3	/set	$ 3,732	$ 11,196
tin box, soap with case, towel, cotton							$ 11,196
umbrella							$ 3,732
torch with battery							$ 7,464
uniform							$ 18,660
ID card							$ 1,244
Sub-total (FCHV incentive (Cash & kinds) - Sunsari district)						**$150,766**	**$464,973**

	YEAR 4 (2010/11)						Total
	# Units	Unit	Cost	Duration	Duration Type	Total	Grand Total
FCHV incentive (Cash & kinds) - Parsa district							
incentive - FCHV	17,739	/people	$ 5	1	/days	$ 88,695	$217,860
color coded thermometer	80	/people	$ 1	1	/time	$ 80	$ 956
weighing scale (color coded)	80	/people	$ 13	1	/time	$ 1,040	$ 12,428
clean delivery kits	14,014	/people	$ 0.4	1	/time	$ 5,606	$ 13,769
suction with bulb/tube & mask	80	/people	$ 1	1	/time	$ 80	$ 956
self inflating bag and mask	80	/people	$ 19.5	1	/time	$ 1,560	$ 18,642
injection gentamicin 20 mg at peripheral health facilities	2,040	/people	$ 1.0	1	/time	$ 2,040	$ 5,011
job aids for ENC, PNC mgmt of birth asphysxia, sepsis, LBW							$ 2,275
forms and registers (birth, treatment, referral call)	796	/people	$ 3.0	3	/set	$ 7,164	$ 21,492
training materials - MCHW							$ 450
insulin syringe for gentamicin	2,040	/people	$ 0.5	1	/set	$ 1,020	$ 2,506
gv 1%	796	/people	$ 0.1	4	/set	$ 318	$ 954
needle to puncture pustule	796	/people	$ 0.2	1	/set	$ 159	$ 477
tetracycline eye ointment	796	/people	$ 1.0	3	/set	$ 2,388	$ 7,164
tin box, soap with case, towel, cotton							$ 7,164
umbrella							$ 2,388
torch with battery							$ 4,776
uniform							$ 11,940
ID card							$ 796
Sub-total (FCHV incentive (Cash & kinds) - Parsa district)						**$110,150**	**$332,004**
VHW incentive (kinds) - Sunsari district							
bicycle							$ 3,484
raincoat							$ 936
torch with battery							$ 312
bag							$ 364
Sub-total (VHW incentive (kinds) - Sunsari district)						**$ -**	**$ 5,096**

	YEAR 4 (2010/11)						Total
	# Units	Unit	Cost	Duration	Duration Type	Total	Grand Total
MCHW incentive (kinds) - Sunsari district							
bicycle							$ 2,680
raincoat							$ 720
torch with battery							$ 240
bag							$ 280
Sub-total (MCHW incentive (kinds) - Sunsari district)						**$ -**	**$ 3,920**
VHW incentive (kinds) - Parsa district							
bicycle							$ 5,561
raincoat							$ 1,494
torch with battery							$ 498
bag							$ 581
Sub-total (VHW incentive (kinds) - Parsa district)						**$ -**	**$ 8,134**
MCHW incentive (kinds) - Parsa district							
bicycle							$ 5,025
raincoat							$ 1,350
torch with battery							$ 450
bag							$ 525
Sub-total (MCHW incentive (kinds) - Parsa district)						**$ -**	**$ 7,350**
TOTAL FCHV/VWH/MCHW incentive						**$260,916**	**$821,477**

Note: exchange rate @ Nrs 67 / $ 1

Justification of FCHV Incentives Calculation:
June 27, 2008

1) Estimated total birth is 100% but we only cover 80%, in first year we will cover 50% because CB-NCP lunch after 6 months. See Table 1.

2) In second and third years we will cover 80% of the total estimated birth. See Table 1.

3) Numbers of FCHVs are in Sunsari 1244 & Parsa 796 = Total 2,040. However, FCHVs will get performance based incentive as per actual child birth in her concern ward, not monthly basis e.g. in a ward, 2 children birth in a month, she will get 2 children x 3 visits x $1.6/visit/child= $10

4) Child birth is calculated 2.25 projected as per existing rate of Central Bureau of Statistics, Government of Nepal

Table 1:

Year/District	Sunsari	Parsa	Total	Sunsari (80% covered)	Parsa (80% covered)
2007/08 Population (running)	733,919	580,572	1,314,491		
Expected child births	*27,869*	*20,742*	*48,611*	22,295	16,594
2008/09 population (projected 2.25)	750,432	593,635	1,344,067		
Expected child births	*28,496*	*21,209*	*49,705*	22,797	16,967
Estimated for the 6 months only because CB-NCP will launch after 6 months in both districts				*11,399*	*8,484*
2009/10 population (projected 2.25)	767,317	606,992	1,374,309		
Expected child births	*29,137*	*21,686*	*50,823*	23,310	17,349
2010/11 population (projected 2.25)	784,582	620,649	1,405,230		
Expected child births	*29,793*	*22,174*	*51,967*	23,834	17,739
Estimate 80% coverage of Expected child births for 2 and half years	*69,941*	*52,055*	*121,996*	*58,543*	*43,572*

5) The calculation of the CHDK supply is revised.

Table 2: CHDK supplies are planned as per childbirth as given below

Year/District	**Sunsari – Target (Estimated 80% of total birth)**	**Sunsari (79% of target coverage) – because of 21% Health facility delivery**	**Parsa – Target (Estimated 80% of total birth)**	**Parsa - (79% target coverage) – because of 21% Health facility delivery**
Estimated for the 6 months only because CB-NCP will launch after 6 months in both districts for 2008/09	*11,399*	9,005	*8,484*	6,702
Expected child births for 2009/10	23,310	18,415	17,349	13,706
Expected child births 2010/11	23,834	18,829	17,739	14,014
Estimate 79% of target coverage of child births for 2 and half years	*58,543*	46,249	*43,572*	34,422

6) We have added 10% margin each year (total 20% in project life) for the replacement of thermometers, scale, self-inflating bag, mask and suction with bulb/tube and mask.