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WORLD VISION OF INDIA

**Report on Baseline Knowledge, Practice  
and Coverage (KPC) Survey  
BALLIA RURAL INTEGRATED  
CHILD SURVIVAL PROJECT  
(BRICS)**

Beruar Beri Block, Ballia District  
Uttar Pradesh State, India

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## Acronyms

ADP	Area Development Program
AED	Academy For Educational Development
AFP	Acute Flaccid Paralysis
AIDS	Acquired Immune Deficiency Syndrome
ALRI	Acute Lower Respiratory Infection
ANC	Ante Natal Care
ANM	Auxillary Nurse Midwife
ARI	Acute Respiratory Infection
APRO	Asia-Pacific Regional Office
BASICS	Basic Support for Institutionalizing Child Survival
BCC	Behavioral Change Communication
BCG	Bacillus Calmette Guerin
BIMARU	Bihar Madhya Pradesh, Rajasthan, Orissa, Uttar Pradesh
BRICS	Ballia Rural Integrated Child Survival
CBDDS	Community Based Disease and Death Surveillance
CBO	Community-Based Organisation
CDD	Control of Diarrheal Diseases
CDO	Community Development Organizer
CMO	Chief Medical Officer
CQI	Continuous Quality Improvement
CRS	Catholic Relief Services
CS	Child Survival
CSP	Child Survival Project
CSSM	Child Survival Safe Motherhood
DIP	Detailed Implementation Plan
DPT	Diphtheria Pertussis, Tetanus
DT	Diphtheria Tetanus
EPI	Expanded Program on Immunization
FGD	Focus Group Discussion
FRU	First Referral Unit
GIK	Gift in Kind
GOI	Government of India
GONGO	Governmental Organization
TBA	Trained Birth Attendant
HFA	Health Facility Assessment
HIS	Health Information System
HIV	Human Immune Deficiency Virus
HMIS	Health Management Information System
IASD	Institute For Applied Statistics and Development
ICDS	Integrated Child Development Program
IEC	Information Education Communication
IMCI	Integrated Case Management of Childhood Illness
IMR	Infant Mortality Rate
IUD	Intra-Uterine Device
KII	Key Informants Interview
KPC	Knowledge Practice Coverage

LB	Live Birth
LCO	Lady Community Organizer
LHV	Lady Health Visitors
MBBS	Bachelor of Medicines Bachelor of Surgery
MCH	Maternal and Child Health
ME	Monitoring and Evaluation
MED	Micro Enterprise Development
MIS	Management Information System
MMR	Maternal Mortality Rate
MOA	Memorandum of Agreement
MOHFW	Ministry of Health and Family Welfare
NFHS	National Family Health Survey
NGO	Non Governmental Organization
OPV	Oral Polio Vaccine
ORS/T	Oral Rehydration Solution/Therapy
PATH	Program for Appropriate Technology in Health
PHC	Primary Health Centre
PHN	Public Health Nurse
PLA	Participatory Learning Appraisal
PMP	Private Medical Practitioner
PSI	Population Services International
PVO	Private Voluntary Organization
RCH	Reproductive Child Health
RH	Reproductive Health
RMP	Registered Medical Practitioner
RTI	Respiratory Tract Infection
SC	Sub Centers
SCM	Standard Case Management
SIFPSA	State Institute of Family Planning
STD	Sexually Transmitted Disease
SWACH	Survival For Women And Child Health
TA	Technical Assistance
TBA	Trained Birth Attendant
TOT	Training of Trainers
TT	Tetanus Toxoid
USMR	Under 5 mortality rate
UNICEF	United Nation International Children Education Fund
USAID	United States Aid for International Development
VAD	Vitamin A Deficiency
VHAI	Voluntary Health Associates Of India
VHG	Village Health Guide
WHO	World Health Organisation
WV	World Vision

## **Executive Summary**

### **Background**

World Vision (WV/US) together with World Vision of India initiated the 4-year Ballia Rural Integrated Child Survival (BRICS) Project in October 1998 in Uttar Pradesh, India, with USAID/BHR/PVC funding. Among the quantitative baseline assessments conducted was the population-based knowledge, practice and coverage (KPC) survey in Beruar Beri Block of Ballia District in November 1999.

The KPC survey findings were used to assist the project in implementing the following interventions: pneumonia case management, diarrhea case management, essential care of the newborn, immunization, prevention of malnutrition and vitamin A deficiency, and reproductive health care. Other baseline quantitative and qualitative assessments are included in the annexes, and the project plans to test the CORE group's new module for NGO assessment of health facilities in April/May 1999 in Ballia.

### **Methods**

The BRICS project customized, translated, back-translated and field-tested the generic KPC survey questionnaire developed by the Johns Hopkins University PVO Child Survival Support Program. A two-stage, 30 cluster sampling survey of 300 mother-child (less than 24 months of age) was conducted. The findings were both manually tabulated as well as analyzed in EPI-Info, with focus on frequencies and cross tabulations.

### **Findings**

The gender breakdown showed more boys (56.9%) than girls (42.8%). 42% of mothers were young (15-24 years of age), while 73.2% were illiterate.

**Pneumonia Case Management** 63.2% were able to recognize 2 of signs/symptoms of pneumonia prompting them to seek care, 66% reported seeking treatment for their child under 2 with pneumonia signs/symptoms, these included the 57.4% (66/115) of mothers who sought private practitioners.

**Diarrhea Case Management** 48% of mothers reported that their children under 2 had diarrhea in the past 2 weeks, 17.6% of children under 2 who had diarrhea in the past 2 weeks were treated with ORT, 16.9% of children under 2 with diarrhea in the past 2 weeks were given the same amount or more fluids other than breast-milk during their diarrheal episode, 20.4% of children under 2 with diarrhea in the past 2 weeks were given the same amount or more food during their diarrheal episode.

**Essential Care of the Newborn** 61.7% of mothers initiated breastfeeding of their last newborn 8 hours or more after delivery. Although the KPC survey did not capture the percentage of post-partum mothers trained in the care of their newborn (hypothermia prevention, low birth weight management and initiation of exclusive breast feeding), the BRICS project has learned that this is not taught in a systematic manner by any health provider in the block.

**Childhood Immunizations** 53.5% of children 12-23 months had an EPI card, 39.1% of these children with cards have been fully immunized before their first birthday, only 20.9% of all children 12-23 months had card-documented coverage of all the six EPI vaccines before their first birthday, 27.6% of all children 12-23 months received a card-documented measles vaccine dose by their first birthday, 53.6% of children 12-23 months with EPI cards had received a measles dose by their first birthday

**TT vaccinations** 5.6% of mothers had two card-documented doses of TT before the birth of their youngest child less than 24 months

**Prevention of Malnutrition and Vitamin A Deficiency** 76.6% of infants 0-4 months were exclusively breast fed last 24 hours, 25.8% of infants 5-9 months were given solid or semisolid foods, 74% of mothers reported having started complementary foods after six months, 5.8% of children 9-23 months received Vitamin A supplements within the past 6 months, none of the mothers with children under 2 received any card-documented high dose vitamin A supplement within 4 weeks of delivery

**Reproductive Health** None of the village clusters had functioning village-based emergency transport schemes for obstetric emergencies, 31.8% of mothers with children under 2 reported at least one unintended pregnancy in the last 12 months, 8.1% of women who desire no children in the next 2 years or are not sure, were using modern contraceptives, only 8.8% of mothers who delivered their youngest child in the last year received at least 90 iron/folate tablet supplements during their last pregnancy, 7% of mothers had at least one card-documented antenatal visit before the delivery of their youngest child less than 24 months, only 1.7% of mothers had at least three card-documented antenatal visits before the delivery of their youngest child less than 24 months, 17% of deliveries in the last 12 months had been attended by a trained health provider or PHC/SC/ANM staff

**Sanitation and water** 83.3% of mothers and their families do not have access to a latrine, and 1% of mothers do not purify their water

## 1. Introduction

In 1997, the Government of India launched the Reproductive and Child Health (RCH) Program with the 4 components of child survival, safe motherhood, family planning and women's reproductive health. Over the past 30 years, India's Family Welfare Program's single objective had been to reduce fertility through a strategy based on contraceptive targets and cash incentives. These latter strategies resulted in inflated performance statistics and neglect of quality of services. The new RCH program calls for a paradigm shift from the previous top-down, target-driven, vertically-oriented and quantitative approach to a decentralized, participatory, client-centered, integrated and quality-focused program.

World Vision, a US-based PVO, received funding approval from USAID/BHR/PVC for \$999,127 to implement an innovative child survival program in Ballia district in Uttar Pradesh (UP) state in India. WV and its principal implementation partner, WV India, seek through this Ballia Rural Integrated Child Survival Project (BRICS) to facilitate policy re-orientation under the new RCH program in Ballia district, namely (a) implementation of decentralized district planning to replace national and state targets, (b) improving the quality and accessibility of child survival services, and (c) increasing utilization of child survival services through community participation and empowerment.

This proposed four-year project commenced in October, 1998 and will end on September 30, 2002.

The impact area proposed is the remote and under-served Ballia district in the eastern UP. The *direct impact area will be one block, namely Beruar Beri Block*, consisting of 150,868 people living in 83 villages (BRICS estimate/1998). The *indirect impact area will cover the other 16 blocks of Ballia district*, totaling 2,583,517 people residing in 1,920 villages. About 79% of families are the poorest of the poor, namely Scheduled Castes and 'Other Backward Castes'. Household incomes average \$20 monthly--well below the GOI-stipulated poverty level of Rp1,200 (\$33). The total number of beneficiaries is estimated to be 2,583,517, with 549,684 families, 85,644 children 0-11 months, 81,344 children 12-23 months, 231,617 children 24-59 months, and 357,479 women 15-44 years.

Uttar Pradesh (UP), where the proposed project will be located, has been labelled as one of 'BIMARU' (or 'sick') states in northern India, and is still home to very high mortality and fertility rates. Most of infant and child deaths are due to pneumonia, diarrhea, malnutrition, neonatal tetanus, low birth weight, prematurity, measles, malaria and underlying vitamin A deficiency. A recent outbreak of 203 cases of acute flaccid paralysis (AFP) was reported in Ballia district and 10 other districts in eastern UP state.

The project's *strategic objective* is to assist the Ballia District Chief Medical Office (CMO) and private sector and community partners to accomplish, sustain, document and replicate best practices to *reduce fertility and infant, child and maternal mortality through an innovative child survival and reproductive health (CS/RH) improvement project* in Beruar Beri Block of Ballia District over a 4-year period. The project plans to go to scale by replicating best practices.

in CS/RH to the entire Ballia District and 3 other WV India Area Development Programs (ADPs) in UP state impacting 221,418 people

Accomplishment of this strategic objective will be evidenced by the following CMO-adjusted *impact indicators*

- TFR reduced from 4.3 to 3.6 per woman,
- U-5MR reduced 143/1000 to 115/1000 LB,
- IMR reduced from 107/1000 to 75/1000 LB,
- MMR reduced from 570/100,000 to 400/100,000 LB,
- Reported AFP Prevalence reduced to zero,
- Vitamin A deficiency prevalence in children 9-35 months reduced by 90%, and a 15% reduction in the number of children 0-23 months who are moderately or severely wasted

*Key CS/ RH interventions* include

- Essential Care of the Sick Child (pneumonia/diarrhea case management),
- Essential Care of the Newborn, Immunization (infants/pregnant women),
- Prevention of Malnutrition and vitamin A deficiency, and
- Reproductive Health

The BRIC's strategic objective will be achieved through the accomplishment of the following five *Intermediate Results (IRs)*

**IR #1** Increased use of high-impact child survival and reproductive health services by the target population,

**IR #2** Strengthened local institutions through partnerships, coalitions and strategic alliances, leading to replication of best practices in child survival and reproductive health across the entire Ballia district and in 3 other WV ADPs in UP,

**IR #3** Enhanced capabilities of individuals, families and communities to protect and provide for their own health,

**IR #4** Improved quality of training, supervision, information and service, leading to raised customer satisfaction, and

**IR # 5** Enhanced sustainability of child survival and reproductive health services and support systems

*General Strategies* These are summarized by the following sub-results of each Intermediate Result

Inter Result #	Sub-results (S R.)
IR # 1	S R # 1a <i>Increased Coverage of Essential Care of the Sick Child</i> S R # 1b <i>Increased Coverage of Essential Care of the Newborn</i> S R # 1c <i>Increased Coverage of Immunization</i> S R # 1d <i>Prevention of Malnutrition and Vitamin A Deficiency</i> S R # 1e <i>Improved Reproductive Health Coverage</i> S R # 1f <i>Improved Malaria Prevention and Control</i>

IR # 2	S R # 2a <i>Capacity building of Public Sector health staff</i> S R # 2b <i>Coalitions, capacity building and organizational development of 3 local NGOS/GONGOS</i> S R # 2c <i>Capacity building of private sector health players</i> S R # 2d <i>Strengthening of WV ADP staff/partners in 3 ADPs in Uttar Pradesh State</i>
IR # 3	S R # 3a <i>Capacity building of community institutions</i>
IR # 4	S R #4a <i>Continuous quality improvement initiated</i>
IR # 5	S R #5a <i>Sustainability initiatives in place</i>

The project will pilot-test with the MOHFW, WHO and UNICEF the following two prototype modules

**(i) Community-based Surveillance of**

- (a) childhood diseases (polio, measles and neonatal tetanus), and
- (b) infant, child and maternal mortality

**(ii) Integrated Management of Cough, Diarrhea and Fever at the community level** by basic health workers [PHC/sub-center staff, Anganwadi Workers ( AWWs), VHGs (Village Health Guides) and traditional birth attendants (TBAs)]

*WV India envisions that these two prototype modules will also be adapted and utilized in 100 districts where WV India's 100 ADPs are located across almost all the states of India. As each ADP covers one block with an average of 100,000 people, a potential population of 10 million people and 245 local NGOs and community-based organizations may eventually be impacted through this proposed replication*

The project's co-location in the same state and district with other large USAID-funded projects (SIFPSA, polio, ICDS) provide opportunities for WV India to facilitate synergistic linkages and impact in eradicating polio, and in reducing fertility and infant, child and maternal mortality in partnership with WHO, UNICEF and Rotary International. The project will also focus on strengthening local partners and promoting *voluntarism among communities*. Its plan to have a strong health management information system, which is focused on quality and impact, will meet the Mission's requirement for a strong performance monitoring and evaluation systems

**2 Survey Objectives**

To provide information to WV India and the BRICS project with information on the following

- a) Knowledge of the mothers with children under 24 months about the major threats to infant, child and maternal health, ways to prevent vaccine-preventable diseases, use of vitamin A-rich foods, correct management of diarrheal diseases, danger signs of pneumonia and information on the use of contraceptives,

- b) Reported practices of these mothers with regard to the interventions mentioned above,
- c) Identification of target groups for health action messages,
- d) Coverage rates of
  - immunization, and drop-out rates of antigens in children 12-23 months,
  - TT coverage in the last pregnancy,
  - reproductive health,
  - vitamin A coverage of children,
  - postpartum Vitamin A supplementation,

### **3 Survey Method**

This baseline KPC survey was conducted in cooperation with Ballia District Chief Medical Officer (CMO), PHC of Beruarbari block, and NGO and community partners from November 9-19, 1998 in Beruar Beri Block of Ballia District. The questionnaire was administered to approximately 300 mothers with children 0-23 months in 30 clusters from Beruar Beri Block.

#### **3.1 Development of Survey Instruments**

The survey was conducted using the generic KPC survey questionnaire developed by Johns Hopkins University School of Public Health, PVO Child Survival Support Program. The questionnaire consisted of 48 customized questions to obtain baseline data directly related to the BRICS' objectives and interventions, and adapted to reflect local circumstances. The questions were grouped together for easy administration and put under different sub-headings.

The questionnaire was originally written in English. The BRICS staff with local inhabitants helped to translate the questionnaire into local dialect (Bhojpur) after the original version was translated into Hindi. Back translations from Bhojpur to Hindi and from Hindi to English by independent translators were made to check on translation accuracy. Further revisions were made after practice sessions with interviewers and supervisors, and after field testing.

#### **3.2 Sampling Design**

The sampling design utilized two-stage cluster sampling based on the WHO standard 30-cluster sampling methodology. The 1998 BRICS' estimate of the population of Beruar Beri block was the basis for creating the sampling frame.

During the first stage, primary sampling units of 30 clusters were selected from a list of the 83 vilages in the block. The sampling interval was calculated using the formula

$$\begin{aligned} &= \text{Total cumulative population}/30 \text{ clusters} \\ &= 150,686/30 = 5,022 \end{aligned}$$

Systematic sampling methodology was used to select 30 clusters (villages)

At the second stage, selection of a constant number of elementary sampling units or households from each selected cluster was conducted. Ten households in each of the 30 clusters resulted in a sample size of 300. All sample households included mothers with children under 24 months.

The selection of elementary sampling units--households--were based on the standard WHO/EPI/UNICEF EPI random walk method. Most of the villages in Beruar Beri Block are large villages, with various castes and religions living in them. They are called *Tolas*.

As the random selection of direction was difficult, the household selection procedure was modified. In the selected villages (clusters), the *tolas* within each village cluster were first mapped, and then the *tola* was selected with a lottery method, followed by random selection of direction, after which the first house was selected. This added step allowed all households of the village cluster, irrespective of any *tola*, equal probability of being selected.

After the first household was identified, the interviewers continued to survey the next household in the chosen direction until the required number of households from each cluster was reached. Fortunately, all 300 mothers were interviewed with little interference, with special care being taken to "filter out" mothers-in-law who might interfere or dominate the interview.

### **3 3 Training of Field Staff (Interviewers and Supervisors)**

Interviewers and supervisors were trained in a three-day intensive training program conducted in the project office. Training focused on survey objectives, sample household selection and interviewing techniques, and was supplemented by role-plays and stimulation exercises. A significant proportion of training time was allocated to in-depth discussion of the each question in the questionnaire. The final day of the training provided an opportunity for both interviewers and supervisors to practice interviewing and to field-test the Bhojuri version of the questionnaire. Findings from the field exercise were incorporated into the final version of the Bhojuri questionnaire. This was followed by refresher training on the accurate recording of responses.

The KPC survey training was facilitated by Dr Mary Lou Rorabaugh, Ph D, a JHU-certified KPC Survey Trainer, and currently the Project Manager of WV Cambodia's USAID/BHR/PVC-funded Kean Svay Child Survival Project.

### **3 4 Field Organization and Survey Operation**

#### **3 4 1 Organization of Survey Teams**

The survey coordination team consisted of Dr Shantannu Dutta, Mr Subodh Kumar, Dr Dennis Cherian and Dr Mary Lou Rorabaugh.

Thirty survey teams were organized from among staff of BRICS, a local NGO and the local PHC. Each survey team consisted of one supervisor and one interviewer, who interviewed 10 mothers each with children under 24 months, in each cluster over two-to-three days, depending on the terrain and geographic location of each cluster.

### **3.4.2 Survey Implementation**

The survey was conducted from November 13-15, 1998. Each team supervisor was responsible for the selection of the *tolas*, the starting household, and the survey direction. The supervisors observed each interview, and checked each questionnaire for completeness before the survey team left the cluster, so that in case of missing or contradictory information the mother could be re-visited the same day.

In Ballia district, birth registration is not common, and most mothers hardly remember the exact dates of birth of their children. Mothers often know the age of their child in months, or can remember the nearest festival or season. Each cluster team had the "Events Calendar" developed by the BRICS project to calculate the birth date of a child. These will be used in the future.

The CMO's consent was obtained for the questionnaire and the survey. Village leaders were also requested for permission to conduct the survey. Each interviewee was informed of the purpose of the survey, approximate time commitment, and was assured of confidentiality and freedom to stop the interview.

To ensure confidentiality, no identifying information was entered into the database. After data was entered into the computer, the interview forms were sealed in a box and locked in a safe cupboard.

### **3.5 Analysis**

Data were entered into EPI-Info 6.04 by project staff under the supervision of Dr. Mary Lou Rorabaugh. Initial analysis involved frequencies of major variables and selected cross-tabulations were performed. No statistical significance tests or confidence intervals of the point estimates were done.

## **4 Survey Results**

### **4.1 Sample Description**

Three hundred mother-child pairs were interviewed. Infants were well distributed by age. The gender breakdown showed more boys (56.9%) than girls (42.8%). Nearly 42% of mothers were young (15-24 years of age). Low educational status of mothers was evident, with 73.2% illiterate.

Only 35.5% of mothers took their children to their work fields. The rest left their children with their husbands (14.3%) or older child (24.7%) or relatives (37.1%).

#### **4.2 Pneumonia Case Management**

- 46% (136/298) of mothers reported that their child under 2 had cough/difficult breathing in the last two weeks, which was conducted in November, the beginning of cold winter season in the area,
- 85.4% (117/136) of these children experienced rapid or difficult breathing, consistent with the diagnosis of pneumonia,
- 63.2% (189/299) of mothers were able to recognize 2 or more danger signs/symptoms of respiratory illness/pneumonia that would prompt them to seek care,
- 66% (76/115) of mothers reported seeking treatment for their child under 2 with pneumonia signs/symptoms, these included the 57.4% (66/115) of mothers who sought private practitioners. This finding is consistent with those from the qualitative PLA exercises which revealed that the majority of mothers sought private practitioners for curative care for their sick children and public health staff for preventive health services.
- The KPC survey instrument was not able to capture the percentage of children 0-23 months who were treated with antibiotics according to standard case management protocol, a separate assessment will be done later. However, additional studies described below show that most treatments received do not meet established standards,

#### **4.3 Diarrhea Case Management**

- 48% (141/300) of mothers reported that their under-2 children had diarrhea in the two weeks prior to the survey.
- 17.6% (25/141) of under-2 children who reportedly had with diarrhea in the past 2 weeks were treated with ORT.
- 16.9% (23/141) of under-2 children with diarrhea in the past 2 weeks were given same amount or more fluids other than breast-milk during their diarrheal episode,
- 20.4% (28/141) of under-2 children with diarrhea in the past 2 weeks were given the same amount or more food during their diarrheal episode,
- 67.6% (96/141) of under-2 children with diarrhea in the past 2 weeks were given same amount or more breast-milk during their diarrheal episode,
- 20.4% (23/137) of children under-2 children with diarrhea in the past 2 weeks were given same amount or more of solids/semi-solids in addition to breastfeeding during their diarrheal episode, 52.6% stopped solids/semi-solids completely, and 22.6% of children had reduced solids/semi-solids,
- 24.1% (34/141) of under-2 children with diarrhea in the past 2 weeks were not given any treatments for their diarrheal episode, yet 54.6% (77/141) received anti-diarrhea medicine.
- Only 8.5% (12/141) received ORS, although 72.3% (102/141) of mothers sought care for their child's diarrhea, these mothers included 41.8% (59/141) who sought a private clinic doctor—these correlates well with the high percentage of under-2 children who received anti-diarrhea medicine mentioned above. Only 6.4% (9/141) of mothers sought the

PHC/sub-center A relatively high 18.6% sought relatives for diarrhea care for their children, another 15.6% sought RMPs for diarrhea care for their children,

- Signs and symptoms cited by mothers that would trigger care-seeking for their child's diarrhea included vomiting (20.9%), fever (33.3%), dehydration (15.5%), and diarrhea of more than two weeks of duration (36.0%), and blood in the stool (6.7%),
- 37.0% (111/300) of mothers with children under 2 had no idea what they would do when their children are recovering from diarrhea, only 29.0% (87/300) said that they would give smaller, more frequent feedings. A smaller number, 4.7% (14/300), said they would give more food and 7.3% (22/300) said that they would give foods with high caloric content.

#### **4.4 Essential Care of the Newborn**

- 61.7% (182/295) of mothers initiated breastfeeding for their last newborn 8 hours or more after delivery,
- Although the KPC survey did not capture the percentage of post-partum mothers trained in the care of their newborn (hypothermia prevention, low birth weight management and initiation of exclusive breast feeding), the BRICS project has learned that this is not taught in a systematic manner by any health provider in the block,

#### **4.5 Immunization**

##### ***Childhood Immunizations***

- Only 53.5% (69/134) of children 12-23 months had an EPI card and mothers of another 34.3% (46/134) of these children had lost their children's EPI cards,
- 39.1% (27/69) of those 69 children 12-23 months with cards have been fully immunized before their first birthday,
- However, only 20.9% (28/134) of all 134 children 12-23 months had card-documented coverage of all the six EPI vaccines before their first birthday,
- Only 27.6% (37/134) of children 12-23 months received a card-documented measles vaccine dose by their first birthday,
- 53.6% (37/69) of children 12-23 months with cards had received a measles dose by their first birthday,
- 65.9% (197/299) of mothers did not know at what age their children should receive measles vaccine, only 4.7% (14/299) knew that the correct age of measles immunization
- DPT1 coverage (91.3% (63/69) of cards or 47% [71/134] of total) dropped by DPT3 (72.5% [50/69] of cards—or 37.3% [50/134] of total). The DPT dropout rate was high (20.6% {91.3-72.5}/91.3)
- OPV1 coverage (91.3% (63/69) of cards or 47% [71/134] of total) dropped by OPV3 (71% [49/69] of cards—or 37.3% [50/134] of total). The OPV dropout rate was similarly high (20.6% {91.3-72.5}/91.3),

##### ***TT vaccinations***

- Only 35.8% (107/299) of mothers knew that tetanus toxoid (TT) vaccines would protect both mother and child against tetanus, another 11.4% (34/299) knew that TT would protect the newborn against tetanus,

- 47.5% (142/299) of mothers did not know why pregnant women are vaccinated with TT,
- 79.3% of mothers knew that 2 or more of TT doses are needed by a pregnant woman to protect her newborn infant from tetanus,
- Only 5.6% of mothers had two card-documented doses of TT before the birth of their youngest child less than 24 months,

#### **4.6 Prevention of Malnutrition and Vitamin A Deficiency**

##### ***Breastfeeding and Nutrition***

- Only 25.8% (77/299) of mothers reported giving colostrum to their newborn,
- 32.5% (96/295) of mothers breastfed their last newborn within 8 hours of delivery,
- 38% of mothers started breastfeeding in the first 24 hours of birth, 62% did not,
- 76.6% (49/64) of infants 0-4 months were exclusively breast fed in the last 24 hours,
- 25.8% (17/66) of infants 5-9 months were given solid or semisolid foods,
- 74% (217/295) of mothers reported having started complementary foods after six months,
- High continuation of breastfeeding was reflected in the 90.3% (28/31) of children 12-23 months who were still being breastfed,
- 86% (258/300) did not know what to do during a baby's first four months to keep on breastfeeding,
- Only 36.6% (108/295) of mothers added oil or fat to their child's diet in the last 2 days,
- Only 39.8% (119/299) of mothers added iodized salt to their child's diet in the last 2 days,
- Only 14.3% (43/300) of mothers knew of the importance of adding vitamin A-rich foods to breastmilk for their weaning children,
- Only 11% (33/300) of mothers knew of the importance of adding iron-rich foods to breastmilk for their weaning children,

##### ***Vitamin A Deficiency***

- Only 5.8% (10/171) of children 9-23 months received Vitamin A supplements within the past 6 months, after this, the first vitamin A round organized with the Polio Plus Day in February 1999 increased the vitamin A coverage of children 6-59 months to 63.5% (see Annex 2),
- None of the mothers with children under 2 received any card-documented high dose vitamin A supplement within 4 weeks of delivery,
- 82.7% of mothers did not know any food which prevents night blindness,
- Reported foods that prevent night blindness include green leafy vegetables (13.7% of mothers), yellow fruits (6.7%), meat/fish (7.3%), egg yolk (2.7%), breast milk (4%)

#### **4.7 Reproductive Health**

- None of the village clusters had functioning village-based emergency transport schemes for obstetric emergencies,

- 31.8% (95/300) of mothers with children under 2 reported at least one unintended pregnancy in the last 12 months,
- 8.1% (24/282) of women who desire no children in the next 2 years or are not sure, were using modern contraceptives,
- Only 8.8% (26/295) of mothers who delivered their youngest child in the last year received at least 90 iron/folate tablet supplements during last pregnancy,
- Sources of iron/folate tablets included the PHC (8.5%), ANM (11%), and subcenters (3.5%),
- Only 7% (21/300) of mothers had *at least one card-documented antenatal* visit before the delivery the delivery of her youngest child less than 24 months,
- Only 1.7% (5/300) of mothers had at least *three card-documented antenatal visits* before the delivery the delivery of her youngest child less than 24 months,
- Only 17% (51/300) of deliveries in the last 12 months had been attended by a trained health provider or PHC/SC/ANM staff
- 33.3% (100/300) of mothers did not know of any food to prevent anemia in pregnancy, those who knew cited eggs (29.3%), and green leafy vegetables (26.7%)
- Only 4.7%(14/300) of mothers knew that a woman should gain at least 8-12 kilograms during pregnancy

#### **4.8 Sanitation and water**

- 83.3% of mothers and their families do not have access to a latrine,
- 71% of mothers do not purify their water,

## **5 Discussion**

The majority of mothers sought private practitioners for curative care for their sick children and public health staff for preventive health services

The first dose of vitamin A (at nine months) is tied with the measles vaccine dose, however, with the current low measles coverage, it will be difficult to increase coverage of children at nine months of age with the first vitamin A dose. Tying vitamin A distribution to children with the NIDs (National Immunization Days) is not sustainable as the NIDs will be phased out after the year 2000. Some other mechanism for delivering vitamin A to children should be explored.

## **6 Conclusion and Recommendations**

### **6.1 Recommendations**

- 1) Recruit a local consultant in FY 2000 to assist in adapting the BASICS/Kurji Holy Family Hospital/Bihar PVO II Operations Research questionnaire/methodology to study the "Quality of Home and Private Practitioner Case Management of Childhood Illnesses" (please see DIP Annex 11 )

- 2) Plan several Continuous Quality Improvement (CQI) exercises with private practitioners to improve the quality of their case management/service delivery related to childhood illnesses,
- 3) Explore with the MOHFW and the UP State health authorities to pilot-test a vitamin A supplement program for post-partum women within 4 months of delivery,
- 4) Increase measles coverage at nine months, and thereby increase vitamin A coverage, meanwhile continue to tie in vitamin A distribution with the NIDs,
- 5) As measles immunization is possibly the single most effective intervention in this population, include measles coverage by 12-23 months and 12-23 months in future immunization KAP results,
- 6) Include a question on maternal night blindness (current/during last pregnancy) in the next KPC survey questionnaire

## **6.2 Discussion, Conclusions and Implications**

### **Immunization**

The number of children who have been completely immunized is 39.1%. This is an area of concern and requires a constant and planned monitoring system, to ensure that all children receive complete immunization. A village-based monitoring system will be established which represents the community, government health system and World Vision. These bodies would ensure a much lower dropout rate. Measures will be undertaken to provide an adequate supply of immunization cards, which will promote better immunization tracking. The cards will be well-maintained in plastic covers. Adequate supervision will be provided for ANMs to ensure that they do household visits and fill out the card regularly, and track the percentage of mothers who receive 2 doses or more of TT, which is crucial to protect the mother and ensure better child survival. Most of the mothers did not know how many doses of TT are required and more than half of the population did not know why a pregnant mother needs to take TT.

### **Nutrition, Breastfeeding and Vitamin A**

The majority of the mothers (62%) started breastfeeding later than 8 hours, with some as late as 3 days, which resulted in a late initiation of breastfeeding. The mothers were not aware of various feeding practices such as positioning the baby and proper sucking of the breast, which are essential feeding practices for the child. Still fewer mothers initiated solid or semisolid foods at 5-9 months of age. Mothers must be made aware of initiating weaning foods within 4 - 6 months through locally available foods. Knowledge of weaning practices will be imparted to the mothers using various health education materials through *mahila mandal* and individual counseling with the help of World Vision and the government health system.

Night blindness is an area of concern as many have reported poor vision at night 83% of mothers are unaware of foods that prevent night blindness, thus it is essential to make them aware of foods that prevent night blindness These foods can be in the form of green leafy vegetables, yellow fruits and egg yolks, etc and grown in a kitchen garden Measures will be taken to ensure that children are receiving Vit-A doses as it was found that only 6% children received Vit- A in the past six months, hence efforts of strengthening supervision and monitoring will be made

### **Pneumonia case management (ARI)**

Of the mothers interviewed with children under 2, 46% reported their child had experienced cough/difficult breathing in the last two weeks, with majority of mothers being aware of signs and symptoms of ARI ARI can be fatal in its later stages, and most mothers in the community recognize pneumonia only when their child finds it difficult to breathe ARI can be treated in its initial stages, hence educating the mother about the symptoms and the treatment is essential

Main causes of pneumonia are unhygienic living conditions, damp houses, poor eating habits, and inadequate clothing Moreover, pneumonia is a seasonal disease and mothers will be taught to take precautions during seasons when it is most common The majority of mothers go to private clinics for ARI treatment where standard case management protocols are not followed, therefore mothers will be made aware of the need to seek appropriate treatment Since the practice of consulting private doctors is common, it is vital to train these private practitioners on correct identification and appropriate measures to prevent pneumonia

### **Diarrhea**

The majority of the mothers were unable to identify diarrhea and were unaware of its signs and symptoms It is therefore important to conduct awareness building programmes in the community using groups and individual counseling

Most of the mothers do not use ORT “sugar salt solutions, ORS, other home remedies” to control diarrhea, therefore mothers must be educated about the benefits of these treatments, using various methods of community-based teaching, such as demonstrations Maintaining a regular and sufficient supply of ORS at the PHC/village depots is also essential Since very few mothers consult qualified medical practitioners, they should be informed about its significance and the need to visit a proper PHC or general hospital A village-based hygiene programme involving things like a better drainage system, better disposal of human and animal excreta would help control the spread of diarrhea to a great extent

### **Birth Spacing**

The community is aware of the benefits of birth spacing, but social practices hinder them from adopting measures of birth spacing It is now very important for the PHCs and WV to bring about an awakening and change in the attitudes of the people Better availability of contraceptives among the villagers will also enable us to achieve this target

Men play a vital role in decisions about family planning and use of contraceptives. Men do not show much inclination to practice birth spacing, thus the PHCs and WV have to identify ways to encourage men to use contraceptives, as well as to allow their wives to use contraceptives. Mothers-in-law and other relatives, along with family circumstances, seem to force women to bear more children. Thus it is important to instill a greater sense of responsibility and confidence in the mothers.

There are various misconceptions about contraceptive methods, such as tubectomy. Villagers believe this causes weakness, and reduces their sex appeal thus leading their husbands to seek multiple sex partners. The communities should be liberated from such misconceptions through better health education programs.

### **Maternal and child health - Reproductive health care**

Very few mothers had any antenatal visits. Many mothers were unaware of the need to visit health professionals. Hence it is important for the government health services along with the staff of WV to provide regular antenatal checkups for mothers. The project will have to educate mothers on the importance of antenatal care to ensure that they avail themselves of these services.

It has also been observed that only 8.8% of mothers received iron tablets. 84% of mothers were unaware of the amount of food to be consumed during pregnancy and 32.9% do not know of any foods that prevent pregnancy anaemia. It has been observed that in addition to making more iron tablets available, the mothers have to be educated about the importance of iron tablets, since mothers who receive iron tablets also seem to have consumed very few of them, and some even threw away the tablets. During antenatal and home visits mothers have to be educated about the amount of food to eat, since it has a direct impact on the health of the child as well as the mother.

70% of the mothers called a *chamaran* (a schedule caste woman meant to do menial tasks) to help cut their umbilical cord, whereas only 12% went to TBAs. Only 17% went to a trained health person. The program will concentrate on educating them to practice hygienic deliveries, such as using sterilized blades, etc.

### **Literacy rate among women**

73% of the women were illiterate. Education plays a major role in building knowledge and initiating appropriate practices. In this case, messages will be communicated using pictorial, easy to understand teaching methods. Various other modes such as individual counseling and group counseling through Mahila Mandals and other forms of communications such as street plays, demonstrations, etc. could be employed.

**Child bearing age**

8% of mothers fall in the age group of 16-19 years, with one or more children 12.3% mothers 30-40 years old are still bearing children

Mothers in these two age groups appear in the *high risk* category Hence the project will educate women below the age of 19 years about the benefits of delaying childbearing, and will encourage older women to consider forgoing additional pregnancies

**Annex 1**

**MOTHER'S AGE**

MOAGE	Freq	Percent	Cum
15	2	0 7%	0 7%
16	3	1 0%	1 7%
17	3	1 0%	2 7%
18	10	3 4%	6 1%
19	5	1 7%	7 8%
20	30	10 1%	17 9%
21	9	3 0%	20 9%
22	25	8 4%	29 4%
23	22	7 4%	36 8%
24	15	5 1%	41 9%
25	57	19 3%	61 1%
26	8	2 7%	63 9%
27	8	2 7%	66 6%
28	15	5 1%	71 6%
29	4	1 4%	73 0%
30	43	14 5%	87 5%
31	3	1 0%	88 5%
32	4	1 4%	89 9%
34	3	1 0%	90 9%
35	17	5 7%	96 6%
36	2	0 7%	97 3%
39	1	0 3%	97 6%
40	7	2 4%	100 0%
Total	296	100 0%	

Total	Sum	Mean	Variance	Std Dev	Std Err
296	7593	25 652	27 034	5 199	0 302

**EDUC**

	Freq	Percent	Cum
1	219	73 2%	73 2%
2	10	3 3%	76 6%
3	38	12 7%	89 3%
4	31	10 4%	99 7%
5	1	0 3%	100 0%
Total	299	100 0%	

**EDUCSPEC**

	Freq	Percent	Cum
B A	1	100 0%	100 0%
Total	1	100 0%	

**CHILDAGE**

	Freq	Percent	Cum
0	7	2 3%	2 3%
1	14	4 7%	7 0%
2	21	7 0%	14 0%
3	11	3 7%	17 7%
4	12	4 0%	21 7%
5	12	4 0%	25 7%

1-1

6		14	4 7%	30 3%
7		8	2 7%	33 0%
8		16	5 3%	38 3%
9		19	6 3%	44 7%
10		15	5 0%	49 7%
11		17	5 7%	55 3%
12		25	8 3%	63 7%
13		20	6 7%	70 3%
14		13	4 3%	74 7%
15		11	3 7%	78 3%
16		6	2 0%	80 3%
17		8	2 7%	83 0%
18		14	4 7%	87 7%
19		7	2 3%	90 0%
20		7	2 3%	92 3%
21		6	2 0%	94 3%
22		9	3 0%	97 3%
23		8	2 7%	100 0%
-----				
Total		300	100 0%	

Total	300	Sum	3145	Mean	10 483	Variance	39 073	Std Dev	6 251	Std Err	0 361
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SEX		Freq	Percent	Cum
4		1	0 3%	0 3%
F		128	42 8%	43 1%
M		170	56 9%	100 0%
-----				
Total		299	100 0%	

MOTAKES		Freq	Percent	Cum
+		106	35 3%	35 3%
-		194	64 7%	100 0%
-----				
Total		300	100 0%	

HUSBAND		Freq	Percent	Cum
+		43	14 3%	14 3%
-		257	85 7%	100 0%
-----				
Total		300	100 0%	

OLDERCHILD		Freq	Percent	Cum
+		74	24 7%	24 7%
-		226	75 3%	100 0%
-----				
Total		300	100 0%	

RELATIVE	Freq	Percent	Cum
+	111	37.1%	37.1%
-	188	62.9%	100.0%
Total	299	100.0%	

NEIGHBOR	Freq	Percent	Cum
+	30	10.0%	10.0%
-	270	90.0%	100.0%
Total	300	100.0%	

CHILDREN AGES 12-24 MONTHS ONLY

Current selection CHILDAGE >11

HAS IMMUNIZATION CARD

IMMCARD	Freq	Percent	Cum
1	69	51 5%	51 5%
2	46	34 3%	85 8%
3	19	14 2%	100 0%
Total	134	100 0%	

RECEIVED BCG

BCGYES	Freq	Percent	Cum
N	72	53 7%	53 7%
Y	62	46 3%	100 0%
Total	134	100 0%	

OPV1YES	Freq	Percent	Cum
N	71	53 0%	53 0%
Y	63	47 0%	100 0%
Total	134	100 0%	

OPV2YES	Freq	Percent	Cum
N	75	56 0%	56 0%
Y	59	44 0%	100 0%
Total	134	100 0%	

OPV3YES	Freq	Percent	Cum
N	85	63 4%	63 4%
Y	49	36 6%	100 0%
Total	134	100 0%	

DPT1YES	Freq	Percent	Cum
N	71	53 0%	53 0%
Y	63	47 0%	100 0%
Total	134	100 0%	

DPT2YES	Freq	Percent	Cum
N	72	53 7%	53 7%
Y	62	46 3%	100 0%
Total	134	100 0%	

DPT3YES	Freq	Percent	Cum
N	84	62.7%	62.7%
Y	50	37.3%	100.0%
Total	134	100.0%	

MEASYES	Freq	Percent	Cum
N	97	72.4%	72.4%
Y	37	27.6%	100.0%
Total	134	100.0%	

Current selection CHILDAGE >11

**RECEIVED ALL IMMUNIZATIONS**

ALLIMM	Freq	Percent	Cum
+	28	20.9%	20.9%
-	106	79.1%	100.0%
Total	134	100.0%	

DID CHILD RECEIVE IMMUNIZATIONS

RECIMM	Freq	Percent	Cum
1	171	57 2%	57 2%
2	122	40 8%	98 0%
3	6	2 0%	100 0%
Total	299	100 0%	

HOW MANY MONTHS OLD SHOULD A CHILD BE WHEN HE RECEIVES MEASLES IMM?

SHOULDMEAS	Freq	Percent	Cum
1	16	5 4%	5 4%
2	24	8 0%	13 4%
3	18	6 0%	19 4%
4	5	1 7%	21 1%
5	3	1 0%	22 1%
6	9	3 0%	25 1%
8	7	2 3%	27 4%
9	14	4 7%	32 1%
12	1	0 3%	32 4%
14	1	0 3%	32 8%
24	3	1 0%	33 8%
36	1	0 3%	34 1%
99 (DNK)	197	65 9%	100 0%
Total	299	100 0%	

WHY SHOULD MOTHERS RECEIVE TT

WHYTT	Freq	Percent	Cum
1	107	35 8%	35 8%
2	16	5 4%	41 1%
3	34	11 4%	52 5%
4	142	47 5%	100 0%
Total	299	100 0%	

HOW MANY TT DOSES DO MOTHERS NEED

TTNEED	Freq	Percent	Cum
1	7	2 3%	2 3%
2	105	35 0%	37 3%
3	133	44 3%	81 7%
4	12	4 0%	85 7%
5	43	14 3%	100 0%
Total	300	100 0%	

BREASTFE01	Freq	Percent	Cum
+	289	96 3%	96 3%
-	11	3 7%	100 0%
Total	300	100 0%	

EVERBREAST	Freq	Percent	Cum
+	13	81 3%	81 3%
-	3	18 8%	100 0%
Total	16	100 0%	

FIRSTBREAS	Freq	Percent	Cum
1	39	13 1%	13 1%
2	57	19 2%	32 3%
3	186	62 6%	94 9%
4	15	5 1%	100 0%
Total	297	100 0%	

COLOSTRUM	Freq	Percent	Cum
1	77	25 8%	25 8%
2	221	73 9%	99 7%
3	1	0 3%	100 0%
Total	299	100 0%	

WHAT CAN A MOTHER DO TO CONTINUE BREASTFEEDING?

CONTDNK	Freq	Percent	Cum
+	258	86 0%	86 0%
-	42	14 0%	100 0%
Total	300	100 0%	

SOON	Freq	Percent	Cum
+	6	2 0%	2 0%
-	294	98 0%	100 0%
Total	300	100 0%	

NIPPLE	Freq	Percent	Cum
+	1	0 3%	0 3%
-	299	99 7%	100 0%
Total	300	100 0%	

IN THE LAST 2 DAYS WHAT DID YOU FEED YOUR CHILD?

MILK	Freq	Percent	Cum
+	108	36 0%	36 0%
-	192	64 0%	100 0%
Total	300	100 0%	

CURD	Freq	Percent	Cum
+	19	6 3%	6 3%
-	281	93 7%	100 0%
Total	300	100 0%	

CHAPATI	Freq	Percent	Cum
+	125	41 7%	41 7%
-	175	58 3%	100 0%
Total	300	100 0%	

FRUIT	Freq	Percent	Cum
+	12	4 0%	4 0%
-	288	96 0%	100 0%
Total	300	100 0%	

GREENLEAF	Freq	Percent	Cum
+	15	5 0%	5 0%
-	285	95 0%	100 0%
Total	300	100 0%	

MEAT	Freq	Percent	Cum
+	9	3 0%	3 0%
-	291	97 0%	100 0%
Total	300	100 0%	

EXCBREAST	Freq	Percent	Cum
+	74	24 7%	24 7%
-	226	75 3%	100 0%
Total	300	100 0%	

BISCUIT	AGEGP				Total
	1	2	3	4	
+	0	3	7	2	12
>	0 0%	25 0%	58 3%	16 7%	> 4 0%
	0 0%	3 4%	8 4%	3 9%	
-	77	85	76	49	287
>	26 8%	29 6%	26 5%	17 1%	> 96 0%
	100 0%	96 6%	91 6%	96 1%	
Total	77	88	83	51	299
	25 8%	29 4%	27 8%	17 1%	

AGEGP FEEDSPEC	AGEGP				Total
	1	2	3	4	
B/F	4	22	12	4	42
>	9 5%	52 4%	28 6%	9 5%	> 76 4%
	30 8%	95 7%	80 0%	100 0%	
HONEY	9	1	3	0	13
>	69 2%	7 7%	23 1%	0 0%	> 23 6%
	69 2%	4 3%	20 0%	0 0%	
Total	13	23	15	4	55
	23 6%	41 8%	27 3%	7 3%	

ARE YOU ADDING			
ADDOIL	Freq	Percent	Cum
1	108	36 5%	36 5%
2	174	58 8%	95 3%
3	14	4 7%	100 0%
Total	296	100 0%	

IODIZED SAL			
	Freq	Percent	Cum
1	120	40 0%	40 0%
2	166	55 3%	95 3%
3	14	4 7%	100 0%
Total	300	100 0%	

WHEN SHOULD A MOTHER START ADDING FOODS TO BREASTFEEDING?			
WHENADD	Freq	Percent	Cum
1	13	4 3%	4 3%
2	30	10 0%	14 4%
3	217	72 6%	87 0%
4	39	13 0%	100 0%
Total	299	100 0%	

1-9

WHAT SHOULD THESE ADDITIONAL FOODS BE?

ADDDNK	Freq	Percent	Cum
+	86	28 7%	28 7%
-	214	71 3%	100 0%
Total	300	100 0%	

OIL	Freq	Percent	Cum
+	80	26 7%	26 7%
-	220	73 3%	100 0%
Total	300	100 0%	

VITA	Freq	Percent	Cum
+	43	14 3%	14 3%
-	257	85 7%	100 0%
Total	300	100 0%	

IRON	Freq	Percent	Cum
+	33	11 0%	11 0%
-	267	89 0%	100 0%
Total	300	100 0%	

ADDSPEC	Freq	Percent	Cum
DAL, RICE	88	75 9%	75 9%
FRUITS	5	4 3%	80 2%
LENTIL SOUP	23	19 8%	100 0%
Total	116	100 0%	

ADDBISC	Freq	Percent	Cum
+	35	11 7%	11 7%
-	265	88 3%	100 0%
Total	300	100 0%	

FEEDSPEC	Freq	Percent	Cum
B/F	42	76 4%	76 4%
HONEY	13	23 6%	100 0%
Total	55	100 0%	

BISCUIT	Freq	Percent	Cum
+	12	4 0%	4 0%
-	287	96 0%	100 0%
Total	299	100 0%	

MILK	AGEGP				Total
	1	2	3	4	
+	20	33	33	22	108
>	18 5%	30 6%	30 6%	20 4%	> 36 0%
	26 0%	37 1%	39 8%	43 1%	
-	57	56	50	29	192
>	29 7%	29 2%	26 0%	15 1%	> 64 0%
	74 0%	62 9%	60 2%	56 9%	
Total	77	89	83	51	300
	25 7%	29 7%	27 7%	17 0%	

CURD	AGEGP				Total
	1	2	3	4	
+	0	7	8	4	19
>	0 0%	36 8%	42 1%	21 1%	> 6 3%
	0 0%	7 9%	9 6%	7 8%	
-	77	82	75	47	281
>	27 4%	29 2%	26 7%	16 7%	> 93 7%
	100 0%	92 1%	90 4%	92 2%	
Total	77	89	83	51	300
	25 7%	29 7%	27 7%	17 0%	

CHAPATI	AGEGP				Total
	1	2	3	4	
+	5	40	48	32	125
>	4 0%	32 0%	38 4%	25 6%	> 41 7%
	6 5%	44 9%	57 8%	62 7%	
-	72	49	35	19	175
>	41 1%	28 0%	20 0%	10 9%	> 58 3%
	93 5%	55 1%	42 2%	37 3%	
Total	77	89	83	51	300
	25 7%	29 7%	27 7%	17 0%	

FRUIT	AGEGP				Total
	1	2	3	4	
+	1	5	3	3	12
>	8 3%	41 7%	25 0%	25 0%	> 4 0%
	1 3%	5 6%	3 6%	5 9%	
-	76	84	80	48	288
>	26 4%	29 2%	27 8%	16 7%	> 96 0%
	98 7%	94 4%	96 4%	94 1%	
Total	77	89	83	51	300
	25 7%	29 7%	27 7%	17 0%	

GREENLEAF	AGEGP				Total
	1	2	3	4	
+	0	3	5	7	15
>	0 0%	20 0%	33 3%	46 7%	> 5 0%
	0 0%	3 4%	6 0%	13 7%	
-	77	86	78	44	285
>	27 0%	30 2%	27 4%	15 4%	> 95 0%
	100 0%	96 6%	94 0%	86 3%	
Total	77	89	83	51	300
	25 7%	29 7%	27 7%	17 0%	

MEAT	AGEGP				Total
	1	2	3	4	
+	0	4	1	4	9
>	0 0%	44 4%	11 1%	44 4%	> 3 0%
	0 0%	4 5%	1 2%	7 8%	
-	77	85	82	47	291
>	26 5%	29 2%	28 2%	16 2%	> 97 0%
	100 0%	95 5%	98 8%	92 2%	
Total	77	89	83	51	300
	25 7%	29 7%	27 7%	17 0%	

EXCBREAST	AGEGP				Total
	1	2	3	4	
+	55	11	5	3	74
>	74 3%	14 9%	6 8%	4 1%	> 24 7%
	71 4%	12 4%	6 0%	5 9%	
-	22	78	78	48	226
>	9 7%	34 5%	34 5%	21 2%	> 75 3%
	28 6%	87 6%	94 0%	94 1%	
Total	77	89	83	51	300
	25 7%	29 7%	27 7%	17 0%	

1-12

CONRICE	Freq	Percent	Cum
+	4	1.3%	1.3%
-	296	98.7%	100.0%
Total	300	100.0%	

CONLENTIL	Freq	Percent	Cum
+	4	1.3%	1.3%
-	296	98.7%	100.0%
Total	300	100.0%	

CONBRMILK	Freq	Percent	Cum
+	17	5.7%	5.7%
-	283	94.3%	100.0%
Total	300	100.0%	

CHILD HAD DIARRHEA IN PAST TWO WEEKS

DIARRHEA	Freq	Percent	Cum
1	142	47 3%	47 3%
2	155	51 7%	99 0%
3	3	1 0%	100 0%
Total	300	100 0%	

HOME CARE DURING DIARRHEA

CDDBREAST	Freq	Percent	Cum
1	7	4 9%	4 9%
2	89	62 2%	67 1%
3	36	25 2%	92 3%
4	8	5 6%	97 9%
5	3	2 1%	100 0%
Total	143	100 0%	

CDDFLUID	Freq	Percent	Cum
1	3	2 1%	2 1%
2	21	14 8%	16 9%
3	24	16 9%	33 8%
4	12	8 5%	42 3%
5	71	50 0%	92 3%
6	11	7 7%	100 0%
Total	142	100 0%	

CDDSOLID	Freq	Percent	Cum
1	5	3 5%	3 5%
2	23	16 2%	19 7%
3	32	22 5%	42 3%
4	72	50 7%	93 0%
5	2	1 4%	94 4%
6	8	5 6%	100 0%
Total	142	100 0%	

CDDNOTHING	Freq	Percent	Cum
+	39	27 3%	27 3%
-	104	72 7%	100 0%
Total	143	100 0%	

ORS	Freq	Percent	Cum
+	12	8 4%	8 4%
-	131	91 6%	100 0%
Total	143	100 0%	

1-14

SUGARSALT	Freq	Percent	Cum
+	7	4.9%	4.9%
-	136	95.1%	100.0%
Total	143	100.0%	

HOMEFLUID	Freq	Percent	Cum
+	9	6.3%	6.3%
-	134	93.7%	100.0%
Total	143	100.0%	

MEDICINE	Freq	Percent	Cum
+	89	62.2%	62.2%
-	54	37.8%	100.0%
Total	143	100.0%	

**CHILD RECEIVED SOME FORM OF ORT DURING DIARRHEA**

ORT	Freq	Percent	Cum
+	25	17.6%	17.6%
-	117	82.4%	100.0%
Total	142	100.0%	

**CARE SEEKING BEHAVIOR DURING DIARRHEA**

CDDHOSP	Freq	Percent	Cum
+	3	2.1%	2.1%
-	140	97.9%	100.0%
Total	143	100.0%	

CDDCLINIC	Freq	Percent	Cum
+	9	6.3%	6.3%
-	134	93.7%	100.0%
Total	143	100.0%	

CDDPRIV	Freq	Percent	Cum
+	63	44.1%	44.1%
-	80	55.9%	100.0%
Total	143	100.0%	

1-15

CDDPHARM	Freq	Percent	Cum
+	6	4.2%	4.2%
-	137	95.8%	100.0%
Total	143	100.0%	

CDDVHV	Freq	Percent	Cum
-	143	100.0%	100.0%
Total	143	100.0%	

CDDTH	Freq	Percent	Cum
+	2	1.4%	1.4%
-	141	98.6%	100.0%
Total	143	100.0%	

CDDTBA	Freq	Percent	Cum
-	143	100.0%	100.0%
Total	143	100.0%	

CDDREL	Freq	Percent	Cum
+	28	19.7%	19.7%
-	114	80.3%	100.0%
Total	142	100.0%	

RMP	Freq	Percent	Cum
+	22	15.4%	15.4%
-	121	84.6%	100.0%
Total	143	100.0%	

CDDNOT	Freq	Percent	Cum
+	28	19.6%	19.6%
-	115	80.4%	100.0%
Total	143	100.0%	

1-16

DANGER SIGNS OF DIARRHEA

CDDSIGNDNK	Freq	Percent	Cum
+	62	20 7%	20 7%
-	238	79 3%	100 0%
Total	300	100 0%	

VOMIT	Freq	Percent	Cum
+	62	20 7%	20 7%
-	238	79 3%	100 0%
Total	300	100 0%	

FEVER	Freq	Percent	Cum
+	100	33 3%	33 3%
-	200	66 7%	100 0%
Total	300	100 0%	

DEHYDRAT	Freq	Percent	Cum
+	47	15 7%	15 7%
-	253	84 3%	100 0%
Total	300	100 0%	

PROLONG	Freq	Percent	Cum
+	107	35 7%	35 7%
-	193	64 3%	100 0%
Total	300	100 0%	

BLOOD	Freq	Percent	Cum
+	20	6 7%	6 7%
-	280	93 3%	100 0%
Total	300	100 0%	

LOSSAPP	Freq	Percent	Cum
+	20	6 7%	6 7%
-	280	93 3%	100 0%
Total	300	100 0%	

WEAK	Freq	Percent	Cum
+	71	23 7%	23 7%
-	229	76 3%	100 0%
Total	300	100 0%	

PROFUSE	Freq	Percent	Cum
+	26	8 7%	8 7%
-	274	91 3%	100 0%
Total	300	100 0%	

WHAT TO DO WHEN CHILD IS CONVALESCING FROM DIARRHEA

CDDCONDNK	Freq	Percent	Cum
+	131	43 7%	43 7%
-	169	56 3%	100 0%
Total	300	100 0%	

FREQUENT	Freq	Percent	Cum
+	97	32 3%	32 3%
-	203	67 7%	100 0%
Total	300	100 0%	

MOREFOOD	Freq	Percent	Cum
+	15	5 0%	5 0%
-	285	95 0%	100 0%
Total	300	100 0%	

CALORIC	Freq	Percent	Cum
+	24	8 0%	8 0%
-	276	92 0%	100 0%
Total	300	100 0%	

CDDCONSPEC	Freq	Percent	Cum
TONIC	26	100 0%	100 0%
Total	26	100 0%	

FREQSUCK	Freq	Percent	Cum
+	37	12 3%	12 3%
-	263	87 7%	100 0%
Total	300	100 0%	

EXCLUSBR	Freq	Percent	Cum
+	5	1 7%	1 7%
-	295	98 3%	100 0%
Total	300	100 0%	

AVOIDBOT	Freq	Percent	Cum
+	3	1 0%	1 0%
-	297	99 0%	100 0%
Total	300	100 0%	

RELACT	Freq	Percent	Cum
+	4	1 3%	1 3%
-	293	98 7%	100 0%
Total	297	100 0%	

CHILD HAD COUGH IN PAST TWO WEEKS

HASCOUGH	Freq	Percent	Cum
1	136	45 5%	45 5%
2	160	53 5%	99 0%
3	3	1 0%	100 0%
Total	299	100 0%	

CHILD HAD RAPID OR DIFFICULT BREATHING

HASRAPID	Freq	Percent	Cum
1	117	85 4%	85 4%
2	20	14 6%	100 0%
Total	137	100 0%	

CARE SEEKING BEHAVIOR FOR CHILD WITH RAPID OR DIFFICULT BREATHING

ARIHOSP	Freq	Percent	Cum
+	2	1 7%	1 7%
-	116	98 3%	100 0%
Total	118	100 0%	

ARICLIN	Freq	Percent	Cum
+	8	6 8%	6 8%
-	110	93 2%	100 0%
Total	118	100 0%	

ARIPRIV	Freq	Percent	Cum
+	73	61 9%	61 9%
-	45	38 1%	100 0%
Total	118	100 0%	

ARIPHAR	Freq	Percent	Cum
+	5	4 3%	4 3%
-	112	95 7%	100 0%
Total	117	100 0%	

ARIVHV	Freq	Percent	Cum
+	1	0 8%	0 8%
-	117	99 2%	100 0%
Total	118	100 0%	

1-19

ARITH	Freq	Percent	Cum
+	19	16 1%	16 1%
-	99	83 9%	100 0%
Total	118	100 0%	

ARITBA	Freq	Percent	Cum
-	118	100 0%	100 0%
Total	118	100 0%	

ARIREL	Freq	Percent	Cum
+	1	0 9%	0 9%
-	114	99 1%	100 0%
Total	115	100 0%	

ARINOTSEEK	Freq	Percent	Cum
+	17	14 4%	14 4%
-	101	85 6%	100 0%
Total	118	100 0%	

**MOTHER SOUGHT TREATMENT BY TRAINED MEDICAL PERSONNEL (includes private practitioners)**

ARIMEDRX	Freq	Percent	Cum
+	81	69 2%	69 2%
-	36	30 8%	100 0%
Total	117	100 0%	

**DANGER SIGNS OF PNEUMONIA**

PNUDNK	Freq	Percent	Cum
+	55	18 3%	18 3%
-	245	81 7%	100 0%
Total	300	100 0%	

FAST	Freq	Percent	Cum
+	178	59 3%	59 3%
-	122	40 7%	100 0%
Total	300	100 0%	

1-20

DIFF	Freq	Percent	Cum
+	97	32 3%	32 3%
-	203	67 7%	100 0%
Total	300	100 0%	

INDRAW	Freq	Percent	Cum
+	42	14 0%	14 0%
-	258	86 0%	100 0%
Total	300	100 0%	

LOSSAPP01	Freq	Percent	Cum
+	34	11 3%	11 3%
-	266	88 7%	100 0%
Total	300	100 0%	

FEVER01	Freq	Percent	Cum
+	123	41 0%	41 0%
-	177	59 0%	100 0%
Total	300	100 0%	

COUGH	Freq	Percent	Cum
+	125	41 7%	41 7%
-	175	58 3%	100 0%
Total	300	100 0%	

WHERE DID SHE RECEIVE ANC

WHERANC	Freq	Percent	Cum
1	27	9 0%	9 0%
2	44	14 7%	23 7%
3	15	5 0%	28 7%
4	41	13 7%	42 3%
6	173	57 7%	100 0%
Total	300	100 0%	

AMTFOOD	Freq	Percent	Cum
1	13	4 3%	4 3%
2	33	11 0%	15 3%
3	244	81 3%	96 7%
4	7	2 3%	99 0%
6	3	1 0%	100 0%
Total	300	100 0%	

WHO CUT CORD

CUTCORD	Freq	Percent	Cum
1	212	70 7%	70 7%
2	37	12 3%	83 0%
3	51	17 0%	100 0%
Total	300	100 0%	

UMBILICUS	Freq	Percent	Cum
1	1	0 3%	0 3%
2	25	8 3%	8 7%
3	178	59 3%	68 0%
4	9	3 0%	71 0%
5	4	1 3%	72 3%
6	83	27 7%	100 0%
Total	300	100 0%	

UMBSPEC	Freq	Percent	Cum
G VIOLET	24	31 2%	31 2%
NOTHING	53	68 8%	100 0%
Total	77	100 0%	

MOTHER RECEIVED DOSES TT

TT	Freq	Percent	Cum
1	5	3.9%	3.9%
2	16	12.5%	16.4%
3	107	83.6%	100.0%
Total	128	100.0%	

ANCVISIT	Freq	Percent	Cum
1	11	8.7%	8.7%
2	10	7.9%	16.5%
3	10	7.9%	24.4%
4	96	75.6%	100.0%
Total	127	100.0%	

IRONTAB	Freq	Percent	Cum
1	8	6.4%	6.4%
2	3	2.4%	8.8%
3	6	4.8%	13.6%
4	108	86.4%	100.0%
Total	125	100.0%	

IS MOTHER PREGNANT NOW PREGNANT	Freq	Percent	Cum
1	21	7.0%	7.0%
2	273	91.0%	98.0%
3	4	1.3%	99.3%
4	1	0.3%	99.7%
9	1	0.3%	100.0%
Total	300	100.0%	

ANOTHERCHI	Freq	Percent	Cum
1	64	22.7%	22.7%
2	206	73.0%	95.7%
3	12	4.3%	100.0%
Total	282	100.0%	

METHOD	Freq	Percent	Cum
1	6	2.7%	2.7%
2	1	0.4%	3.1%
3	10	4.4%	7.5%
5	4	1.8%	9.3%
6	7	3.1%	12.4%
8	198	87.6%	100.0%
Total	226	100.0%	

1-23

**USING MODERN METHOD OF BIRTH SPACING**

MODMETHOD	Freq	Percent	Cum
+	21	7 0%	7 0%
-	279	93 0%	100 0%
Total	300	100 0%	

**DID YOU HAVE AN UNPLANNED PREGNANCY IN PAST YEAR?**

UNPLANNED	Freq	Percent	Cum
1	64	21 4%	21 4%
2	222	74 2%	95 7%
3	10	3 3%	99 0%
8	3	1 0%	100 0%
Total	299	100 0%	

**WHAT DID YOU DO?**

PREGDO	Freq	Percent	Cum
1	6	8 2%	8 2%
2	64	87 7%	95 9%
3	3	4 1%	100 0%
Total	73	100 0%	

PREGSPEC	Freq	Percent	Cum
MISCARRIAGE	3	100 0%	100 0%
Total	3	100 0%	

**WHEN SHOULD A WOMAN FIRST SEE A HEALTH PROFESSIONAL FOR ANC**

FIRSTSEE	Freq	Percent	Cum
1	97	32 3%	32 3%
2	48	16 0%	48 3%
3	10	3 3%	51 7%
4	23	7 7%	59 3%
5	122	40 7%	100 0%
Total	300	100 0%	

**FOODS TO PREVENT ANEMIA**

ANEMIADNK	Freq	Percent	Cum
+	100	33 3%	33 3%
-	200	66 7%	100 0%
Total	300	100 0%	

ANEMEGGS	Freq	Percent	Cum
----------	------	---------	-----

1-24

+	88	29 3%	29 3%
-	212	70 7%	100 0%
-----			
Total	300	100 0%	

ANEMVEG	Freq	Percent	Cum
+	80	26 7%	26 7%
-	220	73 3%	100 0%
-----			
Total	300	100 0%	

ANEMSPEC	Freq	Percent	Cum
FRUITS	41	40 6%	40 6%
MILK	24	23 8%	64 4%
TONIC	36	35 6%	100 0%
-----			
Total	101	100 0%	

HOW MANY PACKES OF IRON TABLETS			
IRONTAKE	Freq	Percent	Cum
1	31	10 4%	10 4%
2	12	4 0%	14 4%
3	27	9 1%	23 5%
4	228	76 5%	100 0%
-----			
Total	298	100 0%	

WHERIRON	Freq	Percent	Cum
1	26	8 8%	8 8%
2	31	10 5%	19 3%
3	9	3 1%	22 4%
4	27	9 2%	31 5%
5	2	0 7%	32 2%
6	200	67 8%	100 0%
-----			
Total	295	100 0%	

HOW MUCH WEIGHT SHOULD A WOMAN GAIN DURING PREGNANCY?			
WEIGHT	Freq	Percent	Cum
1	16	5 3%	5 3%
2	29	9 7%	15 0%
3	206	68 7%	83 7%
4	49	16 3%	100 0%
-----			
Total	300	100 0%	

WTSPEC	Freq	Percent	Cum
1	2	4 3%	4 3%
2	6	13 0%	17 4%

1-25

3		10	21 7%	39 1%
4		9	19 6%	58 7%
5		17	37 0%	95 7%
6		2	4 3%	100 0%
-----				
Total		46	100 0%	

LATRINE	Freq	Percent	Cum
1	250	83 3%	83 3%
2	37	12 3%	95 7%
3	11	3 7%	99 3%
4	2	0 7%	100 0%
Total	300	100 0%	

PURIFY	Freq	Percent	Cum
1	16	5 3%	5 3%
2	9	3 0%	8 3%
3	14	4 7%	13 0%
4	48	16 0%	29 0%
5	213	71 0%	100 0%
Total	300	100 0%	

PURSPEC	Freq	Percent	Cum
NOTHING	44	100 0%	100 0%
Total	44	100 0%	

STORE	Freq	Percent	Cum
1	144	48 2%	48 2%
2	97	32 4%	80 6%
3	57	19 1%	99 7%
5	1	0 3%	100 0%
Total	299	100 0%	

STORESPEC	Freq	Percent	Cum
NO STORAGE	56	100 0%	100 0%
Total	56	100 0%	

## Annex 2

Cluster ##

ID number ####

### BALLIA INTEGRATED RURAL CHILD SURVIVAL RAPID KNOWLEDGE, PRACTICE AND COVERAGE (KPC) SURVEY QUESTIONNAIRE

All questions are to be addressed to the mother with a child less than 24 months of age

Interview date \_\_\_\_\_ Reschedule Interview \_\_\_\_\_

Interviewer name \_\_\_\_\_

Supervisor \_\_\_\_\_

Village \_\_\_\_\_

#### MOTHER EDUCATION/OCCUPATION

1 Name and age of the mother

Name \_\_\_\_\_ Age (Years) \_\_\_\_\_

2 What was the highest educational level you attained ?

1 none

2 primary does not read

3 Primary reads

4 Secondary and higher

5 Other \_\_\_\_\_

3 Name and age of the child less than 24 months of age

Name \_\_\_\_\_

Birth date \_\_\_\_\_ (dd/mm/yy) Age in months \_\_\_\_\_

Sex \_\_\_\_ (M/F)

4 Who takes care of (name of child) while you are away from home ?

Multiple answers possible, record each one)

1 Mother takes child with her

2 Husband

3 Older Children

4 Relatives

5 Neighbors/friends

7 Other \_\_\_\_\_

#### BREASTFEEDING/NUTRITION

5 Are you breastfeeding (name of child) ?

1 Yes  ----> go to 7

2 No

6 Have you ever breast-fed (name of child) ?

1 Yes

2 No  ----> go to 8

7 After the delivery, when did you breast-feed (name of child) for the first time ?

1 During the first hour after delivery

2 From 1 to 8 hours after delivery

3 More than 8 hours after delivery

4 Do not remember

7 b What did you do with the colostrum after delivery of (name of child)?

1 threw away

2 feed to baby

3 other \_\_\_\_\_

8 In the last 2 days what did you feed (name of child)?

1 cow's milk goat milk

- 2 curd
- 3 rice, dal, chapati
- 4 fruits
- 5 green leafy vegetables
- 6 meat, fish, eggs
- 7 others \_\_\_\_\_
- 8 b Are you adding oil or fat to (name of child)'s meals ?
- 1 Yes
- 2 No
- 3 doesn't know
- 8 c Are you adding iodized salt to the (name of child)'s meals ?
- 1 Yes
- 2 No
- 3 doesn't know
- 9 What can a mother do in the baby's first four months of life to keep on breast feeding ?  
(multiple answers possible)
- 1 Doesn't know
- 2 Breastfeed as soon as possible after deliver (don't deiscard colustrum )
- 3 Care of breasts, nipples
- 4 Frequent sucking to stimulate production
- 5 Exclusive breast feeding during the first four months
- 6 Avoid bottle feeding of baby
- 7 Relactation (if had to stop mother can resume breast feeding again)
- 8 Other \_\_\_\_\_
- 10 When should a mother start adding foods to breast feeding ?
- 1 Start adding earlier than 4 months of age
- 2 Start adding between 4-6 months of age
- 3 Start adding later than 6 months of age
- 4 Doesn't know
- 11 What should those additional foods to breast feeding be ?  
(multiple answers possible)
- 1 Doesn't know
- 2 Add oil to food
- 3 Give food rich in Vitamin A
- 4 Give food rich in iron
- 5 others \_\_\_\_\_

VITAMIN A DEFICIENCY

- 12 Which foods prevent "night blindness" ?
- 1 Does't know or other ( )
  - 2 Green leafy vegetables ( )
  - 3 Yellow type fruits ( )
  - 4 Meat/fish ( )
  - 5 Breast Milk ( )
  - 6 Egg Yolks ( )

DIARRHEAL DISEASES

- 13 Has (name of child) had diarrhea during the last two weeks ?
- 1 Yes ( )
  - 2 No ( ) Go to 22
  - 3 Doesn't know ( ) Go to 22

- 14 During (name of child)'s diarrhea did you breast feed? (read choices 1-4 to the mother)
- 1 More than usual ( )
  - 2 Same as usual ( )
  - 3 Less than usual ( )
  - 4 Stopped completely ( )
  - 5 Child not breastfed ( )

- 15 During (name of child)'s diarrhea, did you provide (name of child) with fluids other than breastmilk (read choices 1-4 the mother)
- 1 More than usual ( )
  - 2 Same as usual ( )
  - 3 Less than usual ( )
  - 4 Stopped completely ( )
  - 5 Exclusively breastfeeding ( )

- 16 During (name of child)'s diarrhea, did you continue to provide (name of child) with solid/semisolid foods (read choices 1-4 to the mother)
- 1 More than usual ( )
  - 2 Same as usual ( )
  - 3 Less than usual ( )
  - 4 Stopped completely ( )
  - 5 Exclusively breastfeeding ( )

- 17 When (name of child) had diarrhea, what treatments, if any, did you use ?  
(Multiple answers possible, record all answers)
- 1 Nothing ( )
  - 2 ORS Packet ( )
  - 3 Sugar-salt solution ( )
  - 4 Other home available fluids ( )
  - 5 Anti-diarrhea medicine or antibiotics ( )
  - 6 Other (Specify) \_\_\_\_\_

Mother used ORT for child's diarrhea (yes to any of 17 2 to 17 4) _____	yes/no _____
---	--------------

18 From whom did you seek advice or treatment for the diarrhea of (name of child) ?

Multiple answers possible record each answer)

- 1 General hospital ( )
- 2 Health center/clinic/post ( )
- 3 Private clinic doctor ( )
- 4 Pharmacy ( )
- 5 Village health volunteer ( )
- 6 Traditional healer ( )
- 7 Traditional birth attendant ( )
- 8 Relatives and friends ( )
- 9 Other (specify) \_\_\_\_\_
- 10 RMP ( )
- 11 Did not seek treatment ( )

19 What signs/symptoms would cause you to seek advice or treatment for (name of the child)'s diarrhea ?

(Multiple answers possible, record all answers)

- 1 Doesn't know ( )
- 2 Vomiting ( )
- 3 Fever ( )
- 4 Dry mouth, sunken eyes, sunken fontanelle, decreased urine output (dehydration)
- 5 Diarrhea of prolonged duration (at least 14 days) ( )
- 6 Blood in stool ( )
- 7 Loss of appetite ( )
- 8 Weakness or tiredness ( )
- 9 Other (specify) \_\_\_\_\_

20 What are important actions a mother should take when a child is recovering from diarrhea ? (Multiple answers possible, record all answers)

- 1 Doesn't know ( )
- 2 Give the child smaller more frequent feeds ( )
- 3 More foods than usual ( )
- 4 Give foods with high caloric content ( )
- 5 Other (Specify) \_\_\_\_\_

21 What type of latrine does your household have ?

- 1 None ( )
- 2 Improved latrine ( )
- 3 Pit Latrine ( )
- 4 Other (Specify) \_\_\_\_\_

22 How do you purify your drinking water in your household ?

- 1 Filtrage ( )
- 2 Chlorinate ( )
- 3 Boiling Water ( )
- 4 Others (specify) \_\_\_\_\_

23 Where do you store you household drinking water ?

- 1 Jar with faucet ( )
- 2 Simple Jar ( )
- 3 Others (specify) \_\_\_\_\_

#### RESPIRATORY ILLNESS

24 Has (name of child) been ill with cough or difficult breathing in the last two weeks ?

- 1 yes ( )
- 2 No ( ) go to 27
- 3, Doesn't know go to 27

25 Did (name of child) experience rapid or difficult breathing when ill ?

- 1 Yes ( )

- 2 No ( ) Go to 27
- 3 Doesn't know ( ) Go to 27

26 From whom did you seek treatment for (name of child) when ill with pneumonia ? (multiple answers possible)

- 1 General Hospital ( )
- 2 Health center/clinic/post ( )
- 3 Private clinic doctor ( )
- 4 Pharmacy ( )
- 5 Village health volunteer ( )
- 6 Traditional healer ( )
- 7 Traditional birth attendant ( )
- 8 Relatives and friends ( )
- 9 Other (Specify) \_\_\_\_\_ ( )
- 10 Did not seek treatment ( )

Mother sought appropriate medical care for her child with rapid or difficult breathing  
 ("yes" to any 26 1 to 26 3 \_\_\_\_\_ Yes/no \_\_\_\_\_)

27 What are the signs/symptoms of pneumonia that would cause you to take (name of child) to a health facility ? (multiple answers possible)

- 1 Doesn't know ( )
- 2 Fast breathing ( )
- 3 Difficult breathing ( )
- 4 Chest indrawing ( )
- 5 Loss of appetite ( )
- 6 Fever ( )
- 7 Cough ( )
- 8 Other \_\_\_\_\_ ( )

**IMMUNIZATIONS**

28 Has (name of child) ever received any immunizations ?

- 1 yes ( )
- 2 No ( )
- 3 Doesn't know ( )

29 At what age should (name of child) receive measles vaccine ?

Specify in months \_\_\_\_\_  
 Doesn't know (99 )

30 Can you tell me the main reason why pregnant women need to be vaccinated with tetanus toxoid vaccine ?

- 1 To protect both mother/newborn against tetanus ( )
- 2 To protect only the woman against tetanus ( )
- 3 to protect only the newborn against tetanus ( )
- 4 Doesn't know ( )

31 How many tetanus toxoid injections does a pregnant woman need to protect the newborn infant from tetanus ?

- 1 one ( )
- 2 Two ( )
- 3 More than two ( )
- 4 None ( )
- 5 Doesn't know ( )

32 Do you have an immunization card for (name of child) ?

- 1 Yes ( ) ----> (must see card)
- 2 Lost it ( ) ----> go to 35
- 3 Never had one ( ) ----> go to 35

33 Look at the vaccination card and record the dates of all the immunization in the space below (DD/MM/YY)

BCG \_\_\_\_\_

OPV Ist \_\_\_\_\_

2nd \_\_\_\_\_

3rd \_\_\_\_\_

DPT Ist \_\_\_\_\_

2nd \_\_\_\_\_

3rd \_\_\_\_\_

MEASLES \_\_\_\_\_

Child received all immunizations \_\_\_\_\_ yes/no

Record the dates of all vitamin A Solution given to this child in the space below (dd/mm/yy)

Ist \_\_\_\_\_

2nd \_\_\_\_\_

3rd \_\_\_\_\_

Child received VAC in the last 6 months \_\_\_\_\_ yes/no

MATERNAL CARE

34 Look at the maternal health card and record the number of TT vaccinations in the space below

- 1 One ( )
- 2 Two or more ( )
- 3 None ( )

34b Record the number of antenatal visits

- 1 One ( )
- 2 Two ( )
- 3 Three ( )
- 4 None ( )

34c Record the number of packets of iron tablets

- 1 One
- 2 Two
- 3 Three
- 4 None

35 Are you pregnant now ?

- 1 Yes ( ) ----> go to 38
- 2 No ( )
- 3 Does not know ( )

36 Do you want to have another child in the next two years ?

- 1 Yes ( ) ----> go to 38
- 2 No ( )
- 3 Doesn't know ( )

37 What is the method you or your husband are using now to avoid/postpone getting pregnant ?

- 1 Tubal ligation ( )
- 2 Vasectomy ( )
- 3 Pill ( )
- 4 IUD ( )
- 5 Condom ( )
- 6 Abstinence ( )
- 7 Other (specify) \_\_\_\_\_
- 8 None ( )

Using a modern form of birth spacing (yes to any 37.1 to 37.5)	yes/no
--	--------

38 Did you have an unplanned pregnancy in the past year?

- 1 Yes ( )
- 2 No ( ) ----> skip to 40
- 3 Doesn't know ( )

39 If yes, what did you do

- 1 Abort the foetus
- 2 Carried the pregnancy to term
- 3 Other (specify) \_\_\_\_\_

40 When should a pregnant woman first see a health professional (nurse, doctor) ?  
(Probe for months)

- 1 First trimester, 1-3 months ( )
- 2 Middle of pregnancy 4-6 months ( )
- 3 Last trimester, 7-9 months ( )
- 4 No need to see health worker ( )
- 5 Doesn't know ( )

41 What foods are good for a pregnant woman to eat to prevent pregnancy anemia ?

- 1 Doesn't know ( )
- 2 Proteins rich in iron (eggs, fish, meat) ( )
- 3 Leafy green vegetables, rich in iron ( )
- 4 Other (specify) \_\_\_\_\_

- 42 How many packets of iron tablets did you take when you were pregnant with (name of child)?
- 1 one
  - 2 two
  - 3 three
  - 4 none
- 43 Where did you get the iron/folate tablets?
- 1 PHC
  - 2 ANM
  - 3 Sub Center
  - 4 Private
  - 5 Other (specify) \_\_\_\_\_
  - 6 Never received
- 44 How much weight should a woman gain during pregnancy ?
- 1 8-12 Kilos ( )
  - 2 Gain weight of baby ( )
  - 3 Doesn't know ( )
  - 4 Other (specify) \_\_\_\_\_
- 45 When you were pregnant with (name of child), where did you visit (dispensary/health center, and post) for pregnancy/prenatal care ?
- 1 PHC
  - 2 ANM
  - 3 Sub Center
  - 4 Private
  - 5 Others (specify) \_\_\_\_\_
  - 6 Did not receive prenatal care
- 46 When you were pregnant with (name of child) was the amount of food you ate (list choices)
- 1 More than usual ( )
  - 2 Same as usual ( )
  - 3 Less than usual ( )
  - 4 Doesn't know ( )
- 47 At the delivery of (name of child), who tied and cut the cord ?
- 1 Chamaran ( )
  - 2 Traditional birth attendant ( )
  - 3 health professional (nurse or doctor) ( )
  - 4 Other (specify) \_\_\_\_\_
  - 5 Doesn't know ( )

48 After cutting the cord, what was put on the umbilicus?

1 cowdung ( )

2 ash

3 powder ( )

4 malham ointment

5 ghee ( )

6 other (specify) \_\_\_\_\_

**Annex 3**

**LIST OF THE VILLAGES AND PRIMARY SAMPLING OF CLUSTERS**

SN	NAME OF THE VILLAGE	POPULATION	CUMULATIVE	CLUSTER #
1	SHAHPUR	2840	2840	
2	KATARIA	362	3202	
3	HATIWATA	50	3252	
4	SHAHUDIHI	4021	7273	1
5	JAYATIPAR	1506	8779	
6	AASCHAURA	4580	13359	2
7	NARAINPUR	1036	14395	
8	BADSARI	2016	16411	3
9	JAMALPUR	358	16769	
10	TANDAWA	1225	17994	
11	KALPURA	108	18102	
12	RAJPUR	5109	23211	4
13	SHIVRAMPUR	3984	27195	5
14	SUJOULI	423	27618	
15	MAIRITAR	10905	38523	6,7
16	SHINGOLI	108	38631	
17	MISRAULLIA	1885	40516	8
18	BIJLIPUR	35	40551	
19	SARHARRIA	70	40621	
20	SHIVRAMPATTI	800	41421	
21	MAJUI/ MAJHOSKHURD	1135	42556	
22	ADAR	2230	44786	9
23	DADAR	150	44936	
24	ABDULLAPUR	80	45016	
25	NARAYANPUR V MANDIR	2535	47551	
26	ASEGA	1215	48766	
27	SEIMRI RAMPUR	2565	51331	10
28	DHANPALLIA	735	52066	
29	PAHIYA	814	52880	
30	DHANPAR	565	53445	
31	JANPUR	350	53795	
32	PURANDARPUR	425	54220	

Sampling interval  
5022

Random start  
4506

33	CHITRAULLI	2033	56253	11
34	HARIJANPUR	725	56978	
35	ACHHUI	1545	58523	
36	DHANAUTI	3545	62068	12
37	GOPALPUR KALA	855	62923	
38	SAPAH 2	721	63644	
39	BASARIA	465	64109	
40	KAITHAWALI	5254	69363	13
41	AKHTIARPUR	85	69448	
42	DELUHA	1189	70637	14
43	ASEGI	1215	71852	
44	SURYAPURA	3255	75107	15
45	BHIMPUR	65	75172	
46	JAGDISHPUR	825	75997	
47	GANGBE	850	76847	
48	PINDHARA	837	77684	
49	BABHNAULLI	825	78509	
50	GANGPUR	1235	79744	
51	BARWA	1247	80991	16
52	GYANPUR	252	81243	
53	BERUARBARI	3175	84418	
54	DURGIPUR	2532	86950	17
55	KARIHARA	495	87445	
56	DHANIDHARA	1215	88660	
57	GANDHINAGAR	625	89285	
58	TADILLA	1125	90410	18
59	KARRAMMAR	7468	97878	19
60	KUMIYA AHARA	1723	99601	
61	SULTANPUR	1813	101414	20
62	BAISAHA	785	102199	
63	BANSPALLI	485	102684	
64	MIDDHA	2235	104919	
65	DATIWAR	3522	108441	21
66	RAIPUR	381	108822	
67	KHADDILLA	1700	110522	22
68	MAHUI	815	111337	
69	APAEL	3240	114577	
70	PIRAKHPUR	315	114892	
71	SHIVPUR	3952	118844	23

72	BHAWARPUR	1235	120079	24
73	SAPAH 1	414	120493	
74	SUKHPURA	15870	136363	25 26,27
75	BHARKARA	3582	139945	
76	JAINAGAR	1574	141519	28
77	BHOJPUR	2667	144186	29
78	BHOJPUR MATHIA	982	145168	
79	HARPUR/ CHAPRA	2232	147400	
80	BILLARI	768	148168	
81	SARYAKHAP BILLARI	165	148333	
82	KARAMPUR	1125	149458	
83	KESRIPUR	1228	150686	30
	<b>TOTAL</b>	<b>150686</b>	<b>6054199</b>	

**Annex 4**  
**CLUSTER ASSIGNMENTS**

	<b>TEAM</b>	<b>PERSONS</b>	<b>13 Nov 99 VILLAGES</b>	<b>14Nov 99 VILLAGES</b>	<b>15Nov 99 VILLAGES</b>
A	Supervisor - 1 <sup>st</sup> Interviewer - 2 <sup>nd</sup> Interviewer - Gate Keeper -	Hannah Rekha Urmila Jai Manu Khalkho	Maretar	Dehkula	Khadila
B	Supervisor - 1 <sup>st</sup> Interviewer - 2 <sup>nd</sup> Interviewer - Gate Keeper -	Pallavi Vimla Verma Ranju Mishra Neeraj Masih	Maritar	Karammar	Sukhpura
C	Supervisor - 1 <sup>st</sup> Interviewer - 2 <sup>nd</sup> Interviewer - Gate Keeper -	Hemangini Kamala Devi Mando Devi D L Loyal	Adar	Dhanauti	Datiwar
D	Supervisor - 1 <sup>st</sup> Interviewer - 2 <sup>nd</sup> Interviewer - Gate Keeper --	Rajani Masih Chandmati Manju Amit Hamilton	Simari Rampur	Suryapura	Shivpur
E	Supervisor - 1 <sup>st</sup> Interviewer - 2 <sup>nd</sup> Interviewer - Gate Keeper -	Salma Pushpa Rekha Deepa	Rajpur		Sukhpura
F	Supervisor - 1 <sup>st</sup> Interviewer - 2 <sup>nd</sup> Interviewer - Gate Keeper -	Safina Usha Shanti P M Mathew	Badsari	Chhetrauli	Bhojpur
G	Supervisor - 1 <sup>st</sup> Interviewer - 2 <sup>nd</sup> Interviewer - Gate Keeper	Mamta Habil Nanki Dai Munni Dai Yashwant	Mistravallia	Sultanpur	Jai Nagar
H	Supervisor -	Mamta Singh	Sahodih	Durgapur	Bhairavpur

	1 <sup>st</sup> Interviewer - 2 <sup>nd</sup> Interviewer - Gate Keeper -	Geeta Rani Meena Devi Girish			
I	Supervisor - 1 <sup>st</sup> Interviewer - 2 <sup>nd</sup> Interviewer - Gate Keeper -	Mamta Kumar Kiran Chaubey Meera Devi Santosh	Shivrampur	Kathowali	Sukhpura
J	Supervisor - 1 <sup>st</sup> Interviewer - 2 <sup>nd</sup> Interviewer - Gate Keeper -	Usha Pandey Rupa Devi Durgamati Samson	Aschaura	Tahdila	Kasharipur

## **Annex 5**

### **CONTRIBUTORS**

The following people contributed to the success of this KPC survey

- 1 Dr Mary Lou Rorabough, Project Manager, Kean Svay Child Survival Project, WV Cambodia KPC Survey Trainer/Consultant
- 2 Dr Om Prakash Singh, Chief Medical Officer, Ballia
- 3 Dr Umesh Kumar, Medical Officer, Beruarbari block, Ballia
- 4 Dr Shantanu Dutta, Sujeevan Das (World Vision - North Zone)
- 5 Mamta Habil, Mamta Singh, Safina D Rajan, Pallawai, Mrs Loyala (staff from other World Vision - North Zone Projects)
- 6 Subodh Kumar, Dr Dennis T Cherian, Dr Rakesh Singh, S K Samson, Girish Christian, Frank Francis, Akbar Masih, Yashwant Kumar, Hannah Masih, Deepak Kumar, Neeraj Masih, J M Khalko, Amit Hamilton, Rajani Masih, Hemangini Christian, Salma Mastan, Nirojina Khalko (ADP Ballia team)
- 7 Thirty participants from the target villages who played the role of interviewers