Follow up Survey on CB-MNC Program in Jhapa, Banke and Kanchanpur Districts

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Preface

Community-based maternal neonatal care was the focus of a new technical initiative under the Family Health Division, with financial and technical support provided by USAID/ Nepal Family Health Program (NFHP), implemented by the District Public Health Offices of Jhapa, Banke and Kanchanpur districts and with additional inputs (addressing low birth weight) provided by the USAID-funded ACCESS project.

The work reflected in this report represents the primary tool used to assess the impact of Community-Based Maternal Neonatal Care (CB-MNC). This was a large-scale effort. Finalizing survey instruments involved substantive contributions from a number of individuals, notably from USAID/Nepal, the Nepal Family Health Program, the Johns Hopkins School of Public Health Global Research Activity project, ACCESS project, JHPIEGO and the Valley Research Group.

Conduct of the survey itself was a significant logistical challenge. Three districts were covered at baseline and at follow-up. For each district and for each round 900 households needed to be found in which there had been a live birth over the preceding 12 months. To find these households required visiting a considerably larger number of households, approximately 17,000 per round. The dataset itself was also complex as it involved long survey instruments and several sets of survey respondents (recently delivered women, husbands, mothers-in-law and fathers-in-law).

The field work and analysis were done by Valley Research Group, with active involvement by the NFHP Monitoring and Evaluation team. All of those contributing to this ambitious effort are to be commended for the high level of quality of the work.

The findings are important. The work implemented under CB-MNC was done within the existing district health system, with training inputs and management oversight provided primarily by staff of the District Public Health Offices in the three districts and actual ongoing implementation done by staff of peripheral public sector health facilities along with the Female Community Health Workers (FCHVs) active in their respective communities. Many of the elements of the intervention are established approaches in Nepal (e.g. the Birth Preparedness Package, Iron Intensification). However what was new was the integrated way that they were introduced and delivered. There were furthermore several innovative elements, notably the early post-natal home visit by FCHVs and two new technical interventions – in Banke, the use of oral misoprostol for deliveries unsupervised by skilled birth attendants, to prevent post-partum hemorrhage and – in Kanchanpur – screening and counseling support for low-birth weight babies (focusing primarily on temperature control and feeding issues).

The main finding documented here is a 53% reduction in neonatal mortality, associated with significant positive shifts in service utilization and a range of key household practices. The message is that integrated implementation of such a set of activities and incorporation of new elements like the post-natal home visit and misoprostol are both effective and feasible for implementation at scale under the public health system in Nepal.

Dr. Stephen Hodgins
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Valley Research Group (VaRG)
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Abbreviations

ACCESS	Access to Clinical and Community Maternal, Neonatal and Women's Health Services
AHW	Auxiliary Health Worker
ANC	Antenatal Care
ANM	Assistant Nurse Mid-wife
ARI	Acute Respiratory Infection
BCC	Behavior Change Communication
BPI	Birth Preparedness Index
BPP	Birth Preparedness Package
BS	Baseline Survey
CBIMCI	Community Based Integrated Management of Childhood Illness
CB-MNC	Community Based Maternal and Neonatal Care
CBS	Central Bureau of Statistics
CHDK	Clean Home Delivery Kit
CMA	Community Medical Auxiliary
DHS	Demographic and Health Survey
DIL	Daughter-in-law
EPI	Expanded Program on Immunization
FCHV	Female Community Health Volunteer
FIL	Father-in-law
FP	Family Planning
FS	Follow up Survey
FY	Fiscal Year
GoN	Government of Nepal
HA	Health Assistant
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
HP	Health Post
HW	Health Worker
KMC	Kangaroo Mother Care
LBW	Low Birth Weight
M&E	Monitoring and Evaluation
MCHW	Maternal and Child Health Worker
MIL	Mothers-in-law
MINI	Morang Innovative Neonatal Initiative
MNTE	Maternal and Neonatal Tetanus Elimination
MOH	Ministry of Health
MSC	Matri Suraksha Chaki
NDHS	Nepal Demographic and Health Survey
NFHP	Nepal Family Health Program
NGO	Non-Governmental Organization
NS	Not Significant
PHC ORC	Primary Health Care Outreach Clinic
PHCC	Primary Health Care Center
PNC	Postnatal Care
PPH	Postpartum Hemorrhage
RDW	Recently Delivered Women
Rs	Nepalese Rupees

SBA	Skilled Birth Attendant
SCF US	Save the Children Federation US
SD	Standard Deviation
SES	Socio-Economic Status
SHP	Subhealth Post
SLC	School Leaving Certificate
STI	Sexually Transmitted Infection
TBA	Traditional Birth Attendant
TT	Tetanus Toxoid
TTBA	Trained Traditional Birth Attendant
TV	Television
USAID	United States Agency for International Development
VaRG	Valley Research Group
VDC	Village Development Committee
VHW	Village Health Worker

Executive Summary

Introduction

Nepal's second long-term health plan (1997-2017) has stressed the need for interventions to improve the women and children's health. To achieve these goals a number of national and sub-national programs have been implemented. Community-Based Maternal Neonatal Care (CB-MNC) was one of such projects implemented in the country.

CB-MNC was introduced in three districts (in the third quarter of 2005 in Jhapa and Banke; and in the late 2006 in Kanchanpur), to demonstrate an integrated implementation framework including several elements (some of them are new, some of them strengthened versions of existing programs).

As well as implementing or strengthening existing programs such as 'iron intensification' and the 'birth preparedness package' (BPP), CB-MNC was intended to demonstrate the feasibility of a community-based approach to prevention of postpartum hemorrhage (the most important cause of maternal deaths in Nepal), introducing oral misoprostol distributed by Female Community Health Volunteers (FCHVs). Other novel elements included, in Kanchanpur, screening for low-birth-weight (LBW) and providing more intensive follow-up care to the cases identified (this aspect of the work was implemented under the USAID-funded ACCESS project).

The program area includes rural portions of the three districts. The target populations are pregnant women and newborns. Baseline surveys were carried out in 2005 in Jhapa and Banke, and in 2006 in Kanchanpur. Through follow-up surveys it has been possible to assess changes in knowledge, attitudes and practices regarding maternal and newborn care that could be attributed to the program interventions.

Objectives and methodology

The overall objective of the follow-up surveys was to collect information on knowledge, attitudes and practices of maternal and newborn care among recently delivered women (RDW) and their family in the pilot areas and compare these values with baseline survey results.

The cluster sampling design was used to select the required number of sample population from the study areas. A three-stage sampling design was followed. The methodology adopted in the present follow up survey was similar to that of baseline survey. The same clusters were included in both surveys in all three districts.

The respondents in both the baseline and follow up surveys composed of recently delivered women (RDW) who had given birth in the past 12 months regardless of whether the infant is currently alive or dead including stillbirths, their husbands, and mothers-in-law (MIL). A total of 900 RDW from each of the Jhapa and Kanchanpur and 840 from Banke were included in both the baseline and follow up surveys. Likewise, about 300 husbands and MIL of the interviewed RDW were included from each district during both surveys.

The households and respondents

The demographic characteristics of the households included at the follow up surveys were similar to those included at the baseline surveys. The socio-demographic characteristics of the RDW, husbands and MIL in both the surveys were similar. However, the SES indices of the RDW was observed to be moving towards higher status in Jhapa and Banke and towards lower status among the RDW of Kanchanpur.

Familiarity with FCHVs PHC/ORC

Familiarity of RDW with FCHVs, PHC/ORC and mothers' group increased substantially in all three districts at the follow up surveys compared with the baseline survey results. In all three districts, there was a significant shift in the proportion of FCHVs reported to be providing the specific MCH services. Attendance of RDW in the mothers' group meeting remained low but utilization of ANC and newborn care services, in particular from the PHC ORC increased.

Marriage, fertility and FP uses

The civil registration status of the children increased noticeably in all districts with a large gain in Banke.

Knowledge of modern contraception (including female and male sterilization, oral pills, DEPO and condoms) among the RDW was almost universal. Counseling on FP during early postpartum period increased, with FCHVs as the most important source. Spousal communication on FP improved slightly together with development of favorable attitudes among the husbands towards use of contraceptive as joint business of both the husband and wife.

Antenatal care

One of the objectives of CB-MNC was to increase awareness on safe motherhood services and encourage women to use such services. Awareness of at least three pregnancy-related danger signs also increased significantly (from 26% to 54% in Jhapa, 46% to 87% in Banke, and 17% to 67% in Kanchanpur). The proportion of women experiencing such danger signs decreased in all three districts. There was a growing practice of seeking treatment for pregnancy related problems from the periphery level health facilities and from FCHVs.

A significant improvement was observed in utilization of ANC services by RDW from trained health providers such as doctors, staff nurse, ANM, AHW, HA, or MCHW. The percentage of RDW who received prenatal care at least once from such providers increased (from 74% at baseline to 88% at follow-up in Jhapa, 77% to 91% in Banke and 81% to 88% in Kanchanpur). There were improvements noted across the three districts on all major elements of ANC services.

The practice of consulting FCHVs on ANC/birth preparedness matters such as use of skilled birth attendants, arrangement for emergency transportation, sources of emergency obstetric care, TT vaccination, pregnancy related danger signs and breast feeding also increased notably. About nine in every 10 husbands and MIL in Banke and Kanchanpur and about three-quarters of husbands and MIL in Jhapa met FCHVs to get information on birth preparedness for their wives\daughters-in-law.

There was an increase in the proportion of RDW receiving at least two doses TT vaccines (78% to 92%), iron/folic acid tablets (over 90%), and deworming tablets (73% to 77%) during their last pregnancy s. Receipt of iron/folic acid tablets from FCHVs increased dramatically, and the level of compliance of using the tablets was close to 95%.

At the follow-up the proportion of RDW, husbands and MIL able to correctly name at least three things to be kept clean for delivery increased notably in all three districts.

Family discussion on plan for safe delivery increased at follow up surveys and so did the overall support from family members, which included receiving more than usual amount of food, advice for more rest, and reducing heavy load. Husbands were the main persons to decide matters related to delivery such as identifying birth attendant and health facility.

Delivery services

The proportion of respondents who were aware of at last three danger signs/symptoms during labor increased sharply among the RDW and moderately among the husbands and MIL. The main sources of information on the signs/symptoms were BPP key chain, radio program, FCHVs and family members. Family communication on management of the danger signs/symptoms was found improved.

The proportion of RDW experiencing at least one danger signs/symptoms during delivery declined in Banke and Kanchanpur while no marked difference was observed in Jhapa. Care seeking practice for management of the danger signs/symptoms was found improved except in Jhapa.

Among RDW who delivered with a SBA but without caesarean section, the proportion of those who were given oxytocin was much higher (71% in Jhapa and 81% in Banke) at follow up surveys. At follow up, about 70% of the RDW in both districts reported having had a normal amount of bleeding. The proportion of RDW having had a significantly more than normal amount of bleeding was lower among misoprostol users (26%) than non-users (33%) in Banke. The proportion of women experiencing various specific symptoms during the six hours following delivery in general was lower at follow up surveys. Further disaggregated data of Banke (where misoprostol was introduced) shows generally lower level of symptoms among users than non-users (other than for shivering) suggesting that side effects were not a significant problem for misoprostol users.

Use of assistance of skilled birth attendants during delivery increased in all three districts at follow up surveys. The percentage of RDW who received assistance from SBA increased from 36% at baseline to 45% at follow up surveys in Jhapa, 11% to 17% in Banke and 17% to 24% in Kanchanpur. Use of SBA was highest among RDW in the highest SES quintile. The practice of delivering at a health facility increased significantly in all three districts. In Jhapa about 40% of deliveries took place in private-sector facilities (private clinics or nursing homes). In the other two districts the private sector contribution was less significant. Socio-economic differentials in use of SBAs or HF deliveries remained wider than for most other indicators. Two-thirds of RDW received information about the service sources from FCHVs.

The proportion of RDW delivering at a health facility, based on prior plan was significantly higher at follow-up. In the same way, RDW who considered importance of delivery with a trained health worker and actually delivered with those workers increased from baseline.

Exposure to BCC material providing information on the need for the use of delivery services from trained health worker was reported by nearly half of the RDW, husbands and MIL at follow-up. This information was primarily obtained though radio, FCHVs, TV and health workers. Interpersonal exposure to this message through friends, family members and acquaintances also increased at follow up surveys.

Postpartum services

The proportion of RDW reporting meeting with FCHVs for postpartum care over the six weeks following their recent delivery increased significantly (fourfold in Jhapa and Banke; and twofold in Kanchanpur) from baseline. The majority reported receiving vitamin A and iron tablets and advice on immunization for the newborn, breast feeding and infant care during such visits.

Over two-thirds (69%) of RDW in Kanchanpur followed by 54% in Banke and 24% in Jhapa reported receiving care from a FCHV within 6 weeks after birth. Likewise, over 60% of RDW in Jhapa, 48% in Banke and 44% in Jhapa reported having received a check up from a trained health worker (doctor, nurse, ANM, HA, AHW or MCHW) over that period.

There was improvement in proportion of RDW receiving iron tablets from FCHVs and taking them at postpartum across the three districts. Compliance was good with about 95% of all iron tablets received actually being consumed. Similarly, the proportion of RDW taking vitamin A capsules and receiving postnatal counseling on maternal danger signs or issues markedly increased from baseline.

There was a marked increase (from 44% to 66% in Jhapa, 58%-84% in Banke and 26% to 64% in Kanchanpur) in RDW's awareness of at least three danger signs during postpartum period. Such improvement was observed among husbands and MIL too but to a lesser degree.

The percentage of RDW experiencing postpartum problems was lower in all districts at follow up surveys. In Banke, the proportion of RDW experiencing excessive bleeding was lower among those who used MSC than among non-users. Care seeking and referral for such problems, among those who did experience them, increased across all the three districts.

The proportion of RDW receiving more food than usual and more post-partum support from family members increased notably in Banke and Kanchanpur, but remained at a similar level in Jhapa, where it was already high at baseline.

Knowledge about postpartum hemorrhage and use of misoprostol

The proportion of respondents having knowledge on postpartum hemorrhage, including its relation to maternal death, and the need for immediate care from heath workers increased form baseline.

Information on matri surakcha chaki (MSC, misoprostol) was collected from respondents in Banke. Almost all RDW (96%) and over 60% of the husbands and MIL knew that women should take MSC to prevent postpartum hemorrhage (PPH). Over 90% knew the correct timing and dose of taking MSC. Among RDW who took the medicine, one-third were aware of at least one possible side effect and almost all correctly knew that they should consult health facilities in case side effects appeared.

About 73% of RDW in Banke reported having received MSC tablets during their last pregnancy. Access to this service appeared to have equitable with regard to wealth and caste/ ethnicity. Nearly half (47%) of RDW reported having received MSC when they had been pregnant for eight months, as per protocol. Among RDW who reported receiving MSC tablets, 73% actually took them, and a great majority (80%) of them did so at the prescribed time. The reasons for failure to take the medicine were that the deliveries were performed at health facilities and they were provided with injections instead of MSC after delivery.

Newborn care

Use of clean home delivery kit (CHDK) or clean instrument such as new or boiled blade to cut the cord was quite high (94% to 98%) in all three districts. Similarly, the percentage of RDW applying any substances to the baby's cord stump dropped sharply. Similarly the practice of drying and wrapping the newborn immediately after birth also improved.

The practice of leaving the baby on the cot or on the floor immediately after delivery declined significantly. The awareness about delaying the newborn bath till 24 hours following delivery increased significantly in all three districts. As with knowledge, there was a substantial shift towards the recommended behavior of delaying the time of newborn bath.

Awareness with regard to breastfeeding immediately after birth increased considerably among RDW as well as their husbands and MIL. FCHVs were instrumental in disseminating information on immediate breastfeeding. The proportion of RDW who provided colostrum increased markedly in Jhapa and Banke. In Kanchanpur, colostrum feeding was almost universal even at baseline. The practice of breastfeeding within one hour of birth, and exclusive breastfeeding for children below 6 months of age improved at follow-up in all three districts.

Nearly all RDW at follow-up knew at least one danger sign for newborns. Those who knew at least three increased (from 26% to 51% in Jhapa, 35% to 69% in Banke, and 17% to 54% in Kanchanpur). The proportion of RDW who sought care for their babies from a trained health worker increased notably from the baseline.

Counseling by health workers, FCHVs or TBAs on newborn care increased markedly in all districts. Over 71% of the RDW in Kanchanpur reported having received breastfeeding-related counseling and demonstration in the follow-up survey.

The patterns of reported newborn health problems were similar across districts and between baseline and follow-up surveys, with fever as the most commonly reported problem. Seeking care at health facilities for danger signs during neonatal period increased in Jhapa but remained unchanged in the other two districts. Overall, care was sought more promptly at follow-up. Seeking care for neonates at anytime from trained health workers over the first four weeks of life increased in Jhapa and Banke.

Regarding the size and weight of the newborn, across all three districts there was decline in the proportion reporting their newborn was smaller than average. The percentage of children weighed any time after birth increased substantially in all three districts. More RDW at follow up than at baseline survey perceived that small newborns were more likely to die than those of average size.

Information regarding weighing the newborn by FCHVs and identification and treatment of low birth weight (LBW) children was collected during the follow up survey in Kanchanpur. About two-thirds (65%) of the babies were visited by FCHVs and weighed. More than four-fifths were found to have normal weight, 12% were low birth weight and 6% very low birth weight. About two-thirds of the very low birth weight babies were referred by FCHVs to health facilities. Care of the newborn using Kangaroo Mother Care (KMC) dropped (30% at baseline to 12% at follow up). Despite the FCHVs efforts to promote KMC only half of the 98 mothers of LBW babies actually ended up ever providing KMC and continuation of such care for 24 hours was low.

Neonatal mortality

Overall, there was reduction in neonatal deaths by 53% -- from 46 deaths in the baseline to 22 deaths in the endline surveys. The estimated newborn mortality rate was 18/1000 in the baseline and 8/1000 in the follow up surveys across the three districts. The significance of changes in the newborn mortality rate in each of the three program districts, as well as a pooled rate across the three districts, was calculated using logistic regression. The odd ratios of 0.34 for the reduction in mortality in Banke, representing a reduction in mortality of 66%, is highly significant—both statistically as well as programmatically—as is the estimate of a 53% reduction in newborn mortality across the three districts. The mortality rate also decreased in Jhapa and Kanchanpur although the reduction was not statistically significant within the two districts. Unlike Banke, in both of those districts, baseline neonatal mortality was already quite low, less than half the national level neonatal mortality rate documented in NDHS 2006. The decrease in neonatal has been observed among all socio-economic groups, particularly in the middle three wealth quintiles.

Birth preparedness and access to emergency funds and transportation

Birth preparedness particularly in terms of financial (78% to 84%) and food stuff (68% to 75%) arrangements improved notably at follow-up. Socio-economic differentials continue to be evident at follow-up in birth preparedness. About half of RDW reported having received information on birth preparedness from their FCHVs. Over 80% of RDW in all three districts had set aside money at follow-up vs. only a quarter to a third at baseline. Arrangements for someone to attend delivery and for a safe place for delivery increased sharply across all three districts.

Financial preparation for post delivery and emergency care during delivery also improved significantly in all districts.

Most husbands and MIL (> 75%), both at baseline and follow-up, were aware of the individuals or agencies who could lend money in case of emergency. These agencies included local credit and saving schemes.

Exposure to BCC tools

Information on exposure of respondents to radio health programs was collected in Jhapa and Banke. The most commonly listened to radio health program was "*Jana Swasthya Karyakram*" followed by "*Sewa Nai Dharma Ho*" and "*Jeevan Ko Jimmewari*". Most RDW in Jhapa and Banke reported listening to the *Jeevan Ko Jimmewari* radio drama serial at least once a week. Most respondents reported having heard about timing for antenatal care, pregnancy- and delivery-related danger signs, and financial plans from *Jeevan Ko Jimmewari* radio program. The acquired information was shared by respondents typically with their spouses.

Exposure to street theatre and wall paintings was limited, as only less than a third of respondents reported having seen these media. However, more than 80% of RDW in both Jhapa and Banke reported being familiar with the BPP key chain. More than a quarter of RDW reported that they looked at the key chain at least once a week, and 80% reported that it was seen by their husbands as well. The messages depicted by the key chain were shared among spouses, family members and friends.

Overall, notable improvements occurred in almost all the maternal and newborn care indicators. FCHVs in particular were found to be instrumental in influencing these behaviors.

Chapter 1

Newborn Health in Nepal

1.1 Maternal Health in Nepal

Maternal and neonatal mortality rates have improved in Nepal but remain high. Most women in Nepal still deliver at home, without the services of skilled provider (81%). Use of ANC care is increasing; NDHS, 2006 showed that 72% of women, during their last pregnancy, reported having received ANC, 18% delivered in health facilities and 33% received at least some postnatal care.

Delay in seeking or receiving care is a major contributor to high maternal mortality in Nepal. The Maternal Mortality and Morbidity study (1998) found that mothers are dying due to delaying in decision-making, transportation arrangements and care-seeking at health facilities. As a result, nearly 68% women die at home, 11% on the way and 21% at the health facilities. Proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that may cause death or serious illness of the mother and newborn. Though the Government of Nepal (GoN) promotes delivery by skilled birth attendants (SBAs), use of such services is still low due to poor access and community perceptions about lack of need for such care. Birth preparedness practices remain poor. NDHS 2006 revealed that only 37% of pregnant women saved money, 9% purchased Clean Home Delivery Kit (CDHK), 4% contacted health workers, 1% arranged transport.

1.2 Neonatal Health in Nepal

Nepal has made notable progress in reducing under-5 mortality. Progress has also been made on reducing neonatal mortality but it has been more modest. Infection, birth asphyxia/ trauma, premature birth and hypothermia remain the leading causes of neonatal deaths in Nepal. Underlying contributors to poor neonatal outcomes are: poor health status of women, inappropriate care and support during pregnancy and delivery, lack of care from SBAs, poor fetal weight gain and inappropriate care to postpartum women and newborns.

1.3 Recent Community-Based Initiatives

Nepal's second long-term health plan (1997-2017) has stressed the need for interventions to improve the women and children's health. To achieve these goals a number of national and sub-national programs have been implemented. These include the Expanded Program on Immunization (EPI), promotion of routine antenatal and post-natal (ANC/PNC) check-ups through health facilities, promotion of delivery by skilled birth attendants (SBAs), regular and seasonal family planning services, maternal and neonatal tetanus elimination (MNTE) and integrated management of childhood illness (CB-IMCI). Moreover, several pilots have been or are being implemented in selected areas of Nepal to develop new interventions suitable for national expansion. These have included the Birth Preparedness Package (BPP) program, Saving Newborn Lives supported trials of improved newborn care and, more recently, the Morang Innovative Neonatal Initiative (MINI) program for management of neonatal sepsis and

Community-Based Maternal Neonatal Care (CB-MNC) work implemented with support from the Nepal Family Health Program.

CB-MNC was introduced in three districts (Jhapa, Banke and Kanchanpur), to demonstrate an integrated implementation framework including several elements (some of them are new, some of them strengthened versions of existing programs). Important behavior change objectives have been:

- to increase awareness among pregnant women and their family members on danger signs during antenatal, delivery and postnatal periods;
- planning and preparation for delivery and the postnatal care of the mother and the child; and
- increasing demand for and utilization of specific antenatal, delivery-related and post-natal health services.

The program addresses barriers at household level. As well as implementing or strengthening existing programs such as 'iron intensification' and the 'birth preparedness package' (BPP), CB-MNC was intended to demonstrate the feasibility of a community-based approach to prevention of post-partum hemorrhage (the most important cause of maternal deaths in Nepal), introducing oral misoprostol distributed by Female Community Health Volunteers (FCHVs). Other novel elements included, in Kanchanpur, screening for low-birth-weight and providing more intensive follow-up care to the cases identified (this aspect of the work was implemented under the USAID-funded ACCESS project).

The work began in the third quarter of 2005 in Jhapa and Banke, and in late 2006 in Kanchanpur. Specific objectives of the program have been to increase:

- Percentage of women able to identify danger signs during antenatal, delivery and postnatal periods,
- Coverage of antenatal and postnatal services,
- Use of skilled attendants and institutional delivery,
- The practice of essential newborn care at home,
- The percentage of women who accept postpartum family planning, and
- The percentage of sick neonates referred to the health facilities.

The program area includes rural portions of the three districts. The target populations are pregnant women and newborns. Baseline survey were carried out in 2005 in Jhapa and Banke, and in 2006 in Kanchanpur. Through follow-up surveys it has been possible to assess changes in knowledge, attitudes and practices regarding maternal and newborn care that could be attributed to the program interventions.

Jhapa is located in the eastern terai, Banke in mid-western and Kanchanpur in the far western terai. The estimated total population for FY 2006/7 of Jhapa is 779,092 while that of Banke and Kanchanpur is 447,030 and 440,630 respectively. For administrative purposes, Jhapa and Banke are divided into 47 and 46 Village Development Committees (VDCs) respectively, and Kanchanpur into 19 VDCs. In addition, there are three municipalities in Jhapa and one each in Banke and Kanchanpur. The married female population aged 15-49 in the three districts is estimated at 152,883 in Jhapa, 87,122 in Banke and 86,311 in Kanchanpur, with expected number of pregnancies annually of 30,623 in Jhapa, 16,245 in Banke and 15,861 in Kanchanpur (based on government projections from census data).

Hill Brahmin and Chhetri comprise 40% of the population in Jhapa while Rajbanshi and Limbu account for 9% and 6%, respectively. In Banke, the largest ethnic group is Muslim, accounting for 21% of the total population. Tharu account for 16% while Brahmin and Chhetri make up another 18%. The most numerous group in Kanchanpur is Chhetri (27%) followed by Tharu (23%), Brahmin hill (15%) and Kami (5%).

In Jhapa there are four primary health care centers (PHCC), eight health posts (HP), 40 subhealth posts (SHP) and 525 female community health volunteers (FCHV). In Banke there are two PHCCs, 10 HPs, 34 SHPs and 665 FCHVs. In Kanchanpur there are two PHCCs, eight HPs, 11 SHPs and 771 FCHVs. The ratio of FCHVs to total population varies considerably across the three districts. In Jhapa the ratio is one FCHV per 1,484 population; in Banke - 1: 672 and in Kanchanpur. - 1: 572.

1.4 Objectives of CB-MNC Follow up Survey

The overall objective of the follow-up surveys was to collect information on knowledge, attitudes and practices of maternal and newborn care among recently delivered women (RDW) and their family in the pilot areas and compare these values with baseline survey results.

The specific areas addressed by the survey were:

i) changes in level of knowledge of women and their family members on danger signs that could appear during antenatal, delivery and postnatal periods;
ii) changes in utilization of antenatal and postnatal services;
iii) current use of skilled birth attendants or institutions during delivery;
iv) current practices related to the care of newborn at home;
v) current birth preparedness practices including knowledge of location of providers of services for mothers and newborns with danger signs;
vi) family planning by postpartum women;

Chapter 2

Methodology and Data Collection

2.1 Study population

The study was mainly based on primary sources of information collected using quantitative techniques. The respondents included recently delivered women (RDW), their husbands, and mothers-in-law (MIL). RDW are defined as women who have delivered over the 12 months prior to the survey date (regardless of whether the infant is currently alive or dead), including stillbirths. The study was carried out in the rural areas of Jhapa, Banke and Kanchanpur districts. Municipalities were excluded from the sample frame.

2.2 Sample design

A cluster sampling design was used to select the required number of sample population from the study areas. A three-stage sampling design was followed. The methodology adopted in the present study was similar in baseline and follow-up surveys. In the first stage, 30 clusters (i.e., wards) were selected randomly from the study districts. In the second stage, clusters were mapped and divided into segments and one segment was then chosen. In the third stage, a starting household was chosen in the selected segment, following which the required number of respondents of different categories such as RDW, their husbands, and mothers-in-law were selected. Details of the sampling procedures are provided below.

a) Stage 1: Selection of clusters/wards

For the purpose of the study, the ward was treated as the primary sampling unit (PSU). In the baseline surveys 30 rural clusters were chosen in each district following PPS methodology. The same clusters that were sampled in the 2005 baseline surveys were selected for the follow-up surveys. The sample frame was constructed by listing all VDCs of the study district in alphabetical order within the electoral constituencies. Each of the nine wards in each VDC was listed together with the number of households in the ward. Stratification of the sample frame in each of the electoral constituencies of the district was done in order to ensure the representation of geographical distribution of the sample of wards.

In the first stage of sampling, 30 wards were selected from the sampling frame using probability proportional to size (PPS) principles. Selection of the wards was done in Kathmandu using 2001 census data from the Central Bureau of Statistics. Although 30 clusters were selected in each district, two clusters in Banke could not be reached in the baseline survey for security reasons thus limiting the number to 28. The list of sampled wards by VDCs is presented in **Annex 1.**

b) Stage 2: Selection of segment

In a selected ward, prior to data collection, for the follow-up surveys, the field team, in consultation with the local leaders and key informants, updated the sketch map prepared during the baseline survey. The purpose of updating the sketch map was to locate the settlements and segments within the ward. Then the team estimated the number of household in each segment

with the help of key informants and recorded in a form especially prepared for the purpose of the present study. Upon adding up the households of each segment, the field team chose one segment randomly using PPS.

c) Stage 3: Selection of index household

In both baseline and follow-up surveys, the surveyors then located the center of the selected segment and spun a bottle or pen. The survey team then walked from the center of the segment to the border of the segment in the direction shown by the bottle/pen, and noted and assigned a number to each of the houses situated within 10-20 meters on either side of the path they walked. Finally, the team then randomly chose a number "x" between one and the "total number of houses counted" using a random number table and identified the x^{th} house along the path as the index household.

d) Selection of respondents

Interview with RDW

Following the selection of the index household, the interviewers determined firstly the existence and availability of an eligible RDW in the index household, who was then interviewed if she was available. The interviewers then proceeded to the next nearest household where they again determined the existence/availability of a RDW. The process was continued till 30 RDW were interviewed in the ward. In case the required number of 30 RDW was not reached, the interviewers moved to an adjacent ward to interview RDW, always obeying the rule "go to the next nearest household" until the required number of respondents was reached. Accordingly, the interviewers interviewed RDW from households outside the selected ward only in case of not reaching the required number of 30 RDW in the selected ward. All the RDW of the sampled households that slept the night prior to the survey day were considered as eligible respondents for the purpose of the study.

In the follow-up surveys, in order to get the required number of RDW (900 in Jhapa and Kanchanpur; and 840 in Banke) the team visited 6,998 households in Jhapa, 4,597 households in Banke, and 5,833 households in Kanchanpur to complete screening (Table 2.1) - for each RDW found, the field team had to visit on an average 7.8 households in Jhapa, 5.5 households in Banke, and 6.5 households in Kanchanpur. In the follow-up surveys, in Jhapa RDW were identified in 908 households among 6,998 visited, in Banke - 848 households from among the 4,597 visited, and in Kanchanpur 871 households from among 5,833 households visited. A number of identified RDW (n=61) could not be interviewed (26 in Jhapa, 22 in Banke and 13 in Kanchanpur). The reasons for not interviewing these RDW were as follows:

- RDW was away at parent's home at the time of survey (n=16 Jhapa; 13 Banke; and 5 Kanchanpur)
- Unwillingness to be interviewed (n=7 in Jhapa; 3 in Banke; and 3 Kanchanpur)
- Physically too weak to give interview due to sickness (n= 1 in Jhapa; 3 in Banke; and 3 Kanchanpur)
- RDW not at home even over repeated visits of interviewer (n=2 in Jhapa; 3 in Banke and 2 Kanchanpur)

Interview with husbands and MIL of RDW

In addition to RDW, husbands and mothers-in-law of the interviewed RDW were also included in the follow-up surveys (there were also fathers-in-law included in the baseline surveys). It was planned to include 10 each of the husbands and mothers-in-law from each of the sampled clusters, i.e. 300 respondents of each category; however, in the follow-up surveys slightly fewer were actually reached - 296 husbands and 251 mothers-in-law in Jhapa, 272 husbands and 258 mothers-in-law in Banke, and 292 husbands and 291 mothers-in-law in Kanchanpur. The reason for not reaching the expected sample size for these respondent groups was that in the design of the study it was planned to include 10 husbands and 10 MIL of the interviewed RDW in each cluster. However, while completing the interviews with 30 RDW in each cluster, the field team could not always find 10 respondents of each of these other two categories. The study was designed in such a way that if the required samples of husbands and MIL were not met after interviewing the 30 RDW the field staff stopped interviewing without completing the quota for the husbands and MIL.

Table 2.1 Distribution of clusters, households and respondents in the follow up survey

Description	Jhapa		Banke		Kanchanpur	
	Target (n)	Actual (n)	Target (n)	Actual (n)	Target (n)	Actual (n)
Number of clusters	30	30	28	28	30	30
Number of households visited	-	6,998	-	4,597	-	5,833
Number of households having RDW	-	908	-	848	-	871
Number of households where RDW was interviewed	-	882	-	826	-	858
Number of RDW interviewed	900	900	840	840	900	900
Number of husbands of RDW interviewed	300	296	280	272	300	292
Number of mothers-in-law of RDW interviewed	300	251	280	258	300	291

The total sample in the baseline survey in three study districts was as follows:

District	RDW	Husbands	MIL
Jhapa	900	292	264
Banke	840	278	254
Kanchanpur	900	289	296

2.3 Description of instruments

Five sets of structured questionnaires were used. They included:

a) Screening questionnaire

This questionnaire contained information regarding the RDW and their newborn baby including name, date of birth of the youngest child, gender of child, and whether the child is currently living or not. This questionnaire was administered in each household of the sampled clusters to identify recently delivered women (RDW). This information was used to determine whether or not there are eligible RDW in each household (**see annex 3 for details**).

b) Household questionnaire

The household questionnaire was administered to heads of household or other knowledgeable persons in the household. Information regarding the usual members of the household was collected using the household questionnaire. The information collected included the relationship of each member to the RDW, whether they usually live in the household or not, whether they slept there the night preceding the survey date or not, and sex, age and marital status. In addition, information on household possessions, source of drinking water, existence of toilet, and housing condition was collected using the household questionnaire (**see annex 3 for details**).

c) Questionnaire for RDW

All women aged 15-49 who had given birth in the 12 months preceding the survey date were administered the RDW questionnaire. The information collected included age, sex, education, occupation, media exposure, fertility, knowledge and use of FCHV services, knowledge, attitudes and practices regarding antenatal, delivery and postpartum period including newborn care. Likewise, information about postpartum hemorrhage, postpartum family planning and birth spacing and birth preparedness including access and utilization of emergency funds and transportation were also included in the this questionnaire. There were 12 sections altogether (**see annex 3 for details**).

d) Questionnaire for husbands and mothers-in-law

This module was administered to husbands and mothers-in-law of the RDW who were interviewed. The information included background characteristics such as age, literacy, education, exposure to media, knowledge and use of FCHV services, knowledge about and attitudes towards safe motherhood, types of safe motherhood services received by their wives or daughters-in-law, knowledge, attitudes and practices related to newborn care, birth preparedness, and utilization of emergency fund and mode of transport used by their wives or daughters-in-law during recent delivery. Similarly, information about the use of postpartum family planning services was also collected from the husbands of RDW. There were eight sections in this questionnaire (**see annex 3 for details**).

2.4 Design and pre-testing of instruments

The questionnaires were developed first in English and finalized after receiving comments and suggestions from colleagues from partner organizations. The final versions of the questionnaires in English were then translated into Nepali. The questionnaires were pre-tested with 22 RDW, 10 mothers-in-law and five husbands of RDW each in the rural areas of Parsa and Lalitpur districts. One supervisor and two female interviewers were involved in pre-testing of the questionnaire. The survey instruments were modified based on the pretest findings and finalized in close consultation with NFHP.

2.5 Field organization and data collection

The study was conducted under the overall supervision and guidance of senior researchers assigned to the study. They were assisted by other administrative and field staff.

Five teams, each consisting of one supervisor and three female interviewers were mobilized for data collection in Jhapa and Banke and six teams in Kanchanpur. Each team covered 5-6 clusters over the duration of the field exercise. The field team members were given training for nine days before being sent to the field. Short presentations, role-play and field practice were the methods used. Staff from NFHP also contributed to the training. The topics covered included: a) introduction to the CB-MNC program, b) purpose of the study, c) nature of various instruments and their use, d) rapport building with local organizations and respondents, and e) orientation on the questionnaires and the guidelines. An interviewer manual was also prepared in order to maintain consistency in the data collection process and to ensure quality. One Field Research Assistant was also deputed in each study district in order to supervise and monitor data collection work during the entire data collection period. Data collection for the follow-up surveys in Jhapa and Banke was carried out during June and July 2007 and, in Kanchanpur, during September and October. Fieldwork in Jhapa and Banke was conducted simultaneously. The Supervisor for each team was in charge of mapping, segmentation, and selection of the index households.

In addition, the Senior Researcher also visited the study areas during conduct of the follow-up surveys to supervise and monitor the data collection activity. After one week of field activities, one-day debriefing sessions with the field staff were organized in Birtamod, Jhapa, Nepalgunj, Banke, and Mahendranagar, Kanchanpur in order to share the field workers' experiences gained during data collection. The NFHP M&E Team Leader and regional and district level NFHP staff, and ACCESS Team (Kanchanpur) also participated during these workshops. They were instrumental in providing necessary feedback and guidance to the field team.

2.6 Data cleaning and analysis

All completed questionnaires were brought to the VaRG office. The completed questionnaires were checked and coded by a team composed of a data editor and a coder. Then data were entered and validated by a computer processing team consisting of a computer programmer and data entry personnel. To ensure accuracy and quality of data entry, 5% of the data were double-entered by the data entry personnel and then both sets of data were compared to identify inconsistencies. Inconsistencies between two entries were negligible (0.18% in Jhapa and Banke and 0.1% in Kanchanpur).

Upon completion of data entry, a printout of raw data was generated and checked against the questionnaires in order to detect data entry errors. Machine editing of the data was done to generate a cleaned data set. The data were then analyzed using SPSS software, using simple frequency tables and two/three way cross tabulations. In addition, comparative analysis of the follow-up survey results with those from the baseline survey results was done. All tests of the strength of association between selected variables that are described in this report have been conducted using the Chi Square test. Further, the Chi Square test for the pre- and -post comparisons at aggregate level has been performed by adjusting the cluster design effect of the surveys using SPSS software.

Chapter 3

Characteristics of the Households and Respondents

This chapter covers the age, sex and marital status of household members, selected household assets, drinking water facility, sanitation conditions and type of house. Selected socio-economic and demographic characteristics of the recently delivered women (RDW), and their husbands and mothers-in-law (MIL) are also discussed.

3.1 Characteristics of the sampled households

The average family size in the sample households of Jhapa and Kanchanpur was essentially the same in baseline (BS) and follow-up (FS) samples (Jhapa: 5.9 in BS and 6.0 in FS; Kanchanpur: 8.3 in BS and 8.2 in FS) but, in Banke, in the follow-up survey mean family size was less than in the baseline (7.2 in BS and 6.7 in FS). It is to be noted that the household characteristics reported here reflect a sample only including households that have recently delivered women, therefore are not necessarily comparable to the census or the overall situation of households in the district.

a) Age, sex and marital status of the household population

Table 3.1 presents the distribution of household population by age. There was no large differences in age distribution between the baseline and follow up surveys. However the mean age of the household population was slightly higher in all three districts in the follow up survey than in the baseline surveys.

Table 3.1 Percent distribution of household population by age in the baseline and follow up surveys

Age in completed years	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Less than one year	16.9	16.8	13.7	14.8	12.5	12.8
1-4	9.8	8.3	10.5	9.3	10.9	10.6
5-9	9.3	9.5	13.7	12.8	11.6	11.3
10-14	5.6	5.6	8.3	8.1	9.0	8.2
15-19	6.8	6.7	8.3	8.1	8.4	8.8
20-24	13.3	12.7	11.8	12.5	13.2	13.5
25-29	12.4	12.7	9.6	10.5	9.7	10.3
30-34	6.4	7.7	6.1	5.3	5.4	5.2
35-39	3.5	3.9	3.8	3.6	3.0	3.3
40-44	2.3	2.5	2.4	2.2	2.7	2.5
45-49	2.9	2.7	2.8	3.0	2.8	2.9
50-54	3.3	3.0	2.8	2.6	3.2	3.2
55-59	2.2	2.4	1.9	2.5	2.6	2.4
60-64	2.6	2.1	2.0	2.1	2.7	2.4
65 and above	2.8	3.4	2.3	2.5	2.4	2.8
Total (n)	**5200**	**5312**	**5922**	**5549**	**7198**	**7052**

Information regarding the marital status of all household members aged 10 years or above was also collected. Table 3.2 presents the age-specific marital status of both the male and female population of the sampled households included in the follow up survey. About three-quarters

(70%-76%) of the household population of both sexes were currently married in all three study districts and about 2% of males and 6% of females reported to be either divorced, separated or to be a widow/widower. In Jhapa and Banke most women aged 15-19 were married. In Kanchanpur the proportion was somewhat less.

Table 3.2 Percent distribution of household population aged 10 years who were married at the time of survey in the follow up survey

Age group (in years)	Jhapa		Banke		Kanchanpur	
	Male	Female	Male	Female	Male	Female
10-14	-	-	0.4	-	0.4	0.6
15-19	10.9	56.7	20.9	61.1	14.8	47.5
20-24	66.0	92.4	86.7	95.9	73.4	92.2
25-29	87.1	96.6	97.7	98.5	96.1	99.2
30+	97.8	97.3	99.3	99.7	99.3	99.7
Total (%)	**76.5**	**82.1**	**75.7**	**80.5**	**72.9**	**76.4**
(n)	**1677**	**1795**	**1694**	**1802**	**2201**	**2404**

b) Household assets

Information about the availability of electricity and telephone connection at home, and possession of bicycle, television and radio was collected. The proportion of households having these items was slightly higher in the follow up surveys than in the baseline surveys (with a larger difference evident for Banke) (Table 3.3).

Table 3.3 Percent distribution of respondents having different items in their households in the baseline and follow up surveys

Household items	Jhapa		Banke		Kanchanpur	
	Baseline (n=886)	Follow up (n=882)	Baseline (n=820)	Follow up (n=826)	Baseline (n=865)	Follow up (n=858)
Electricity	67.5	73.1	28.7	44.2	37.2	40.7
Bicycle	68.6	74.6	67.6	75.1	74.7	77.4
Telephone	1.8	5.6	0.6	2.5	0.8	3.0
Television	42.7	55.8	17.2	22.0	25.8	31.5
Radio	56.5	62.1	44.5	55.9	49.6	65.4

c) Water and sanitation

Information regarding the sources of drinking water and toilet facility was also collected from all the respondents. Tube well was the main source of drinking water. The proportion of households having their own tube well was similar in baseline and follow-up surveys, except in Banke where the level was higher in the follow-up survey (Table 3.4).

Table 3.4 Percent distribution of households by source of drinking water in the baseline and follow up surveys

Main source of drinking water	Jhapa		Banke		Kanchanpur	
	Baseline (n=886)	Follow up (n=882)	Baseline (n=820)	Follow up (n=826)	Baseline (n=865)	Follow up (n=858)
Piped into house/yard/plot	4.9	6.8	0.4	0.7	0.7	3.1
Public / neighbor's tap	5.6	6.0	-	-	2.3	0.5
Well in house/yard/plot	7.2	5.9	2.8	2.7	1.4	2.7
Public/neighbor's well	5.3	3.4	3.0	1.1	0.9	0.2
Tube well in yard/plot	53.6	56.9	51.8	63.3	86.4	83.8
Public/neighbor's tube well	23.0	20.6	40.6	31.2	8.1	9.6
Spring/kuwa	0.2	0.3	1.2	1.0	0.2	1.0
River/stream/pond/lake/stone tap	0.1	-	0.1	-	-	-

As with water facilities, toilet arrangements were similar between baseline and follow-up, except in Banke where the proportion reporting having some facility was higher in the follow-up survey (Table 3.5).

Table 3.5 Percent distribution of households having toilets in the baseline and follow up surveys

Type of toilet facility	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Flush toilet	0.5	0.6	1.1	0.4	0.3	0.2
Traditional pit toilet	23.4	20.9	7.3	8.4	22.7	18.5
Ventilated improved pit latrine	24.0	28.2	7.2	15.9	15.4	20.6
No facility / bush / field	52.0	50.3	82.6	74.1	61.6	60.6
River/rivulet	0.1	-	1.8	1.3	-	-
Total (n)	**886**	**882**	**820**	**826**	**865**	**858**

d) Housing conditions

For housing conditions also, survey results from Banke differed from the other two districts in that conditions in the follow-up sample were somewhat better than for the baseline sample (Table 3.6).

Table 3.6 Percent distribution of households by main materials used in the houses in the baseline and follow up surveys

Description	Jhapa		Banke		Kanchanpur	
	Baseline (n=886)	Follow up (n=882)	Baseline (n=820)	Follow up (n=826)	Baseline (n=865)	Follow up (n=858)
Main material of the floor (Record observation)						
Earth/mud/dung	73.8	74.9	92.9	87.5	86.4	86.9
Cement	15.7	18.3	7.0	12.3	13.4	12.7
Wood planks	9.8	6.3	-	-	0.1	0.3
Other§	0.6	0.4	0.1	0.1	0.1	-
Main material of the roof (Record observation)						
Thatch	29.5	32.4	35.1	30.1	15.5	15.6
Metal	59.3	59.6	3.2	4.1	4.4	3.1
Tiles/Khapada	0.5	0.6	44.6	48.5	67.6	71.0
Cement	4.9	4.3	16.8	17.2	12.1	10.3
Other±	6.0	3.0	2.0	-	0.3	-
Main material of the walls (Record observation)						
Bamboo with mud	66.7	64.5	24.6	48.9	37.3	60.6
Bamboo with cement	10.7	6.9	0.1	0.4	0.1	-
Adobe	0.1	0.6	14.3	15.6	3.1	4.5
Unfinished wood	6.4	6.5	6.2	0.6	25.5	14.8
Cement	10.4	11.8	10.0	10.9	13.8	11.8
Bricks	4.1	4.2	15.7	14.2	6.0	5.5
Cement blocks	0.1	0.5	0.4	2.1	0.7	1.4
Other‡	1.5	0.3	28.7	2.2	13.4	1.4

§ Other includes: linoleum; carpet; ceramic tiles, marble chips.

± Other includes: plastics; chitra; leaf of sugarcane; paddy straw.

‡Other includes: wood planks; mud plastered wooden or stone wall; mud only; fenced by lentil straw fenced by thatch; clay mixed with cow dung and chopped paddy straw; tin; fenced by wild plants and lentil straw; bamboo stick.

3.2 Characteristics of the respondents

This section presents socio-demographic characteristics of the recently delivered women (RDW), their husbands and mothers-in-law included in both survey periods. Age, literacy status, educational achievement, caste/ethnicity, occupation, and exposure to radio and television of the respondents are discussed in this section.

a) Age, educational level, literacy status and caste or ethnicity

Age composition

Table 3.7 shows the age distribution of RDW in Jhapa, Banke and Kanchanpur included in the baseline and follow-up surveys. The picture with regard to RDW age distribution remained relatively unchanged between baseline and follow-up in all three districts. This was also the case for husbands (see Table 3.8, below) and for mothers-in-law (table not shown).

Table 3.7 Percent distribution of RDW by age group in the baseline and follow up surveys

Age of respondent (Age in completed years)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
15-19	11.9	13.0	15.5	14.0	12.9	14.3
20-24	40.8	39.4	36.3	40.8	46.0	43.4
25-29	29.1	30.1	25.8	26.7	25.9	27.2
30-34	10.7	11.7	13.5	11.1	9.2	10.0
35-39	5.4	4.6	7.3	5.5	4.3	3.8
40-44	1.7	1.1	1.2	1.7	1.3	1.2
45-49	0.4	1.1	0.5	0.2	0.3	-
Median	**24.0**	**24.0**	**24.0**	**24.0**	**23.0**	**23.0**
SD	**5.4**	**5.2**	**5.8**	**5.5**	**5.1**	**4.9**
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

Table 3.8 Percent distribution of the husbands of RDW by age group in the baseline and follow up surveys

Age of respondent (Age in completed years)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
15-19	1.0	0.7	4.7	2.6	3.8	1.0
20-24	20.2	17.9	27.7	23.9	27.7	29.1
25-29	31.2	29.7	27.0	32.4	33.2	33.6
30-34	24.0	27.7	19.4	18.8	17.6	16.1
35-39	13.0	14.5	12.2	13.6	11.1	12.0
40-44	5.8	6.1	4.0	4.4	3.5	4.1
45-49	2.7	1.0	2.9	2.2	1.4	2.1
50-54	1.4	1.4	1.4	0.7	1.4	1.4
55-59	0.3	0.3	0.4	1.1	0.3	0.7
60-64	0.3	0.3	0.4	-	-	-
Median	**29.0**	**30.0**	**27.0**	**27.0**	**27.0**	**28.0**
SD	**7.0**	**6.6**	**7.6**	**7.1**	**6.7**	**7.0**
Do not know	-	0.01	-	0.4	-	-
Total (n)	**292**	**296**	**278**	**272**	**289**	**292**

Caste/Ethnicity

Caste-ethnicity composition of the samples was quite similar comparing baseline to follow-up, except that, in Banke, in the follow-up Tharu made up about 5% less of the sample and Muslims about 5% more – than at baseline. Table 3.9 further shows ethnic composition of the population of three study districts according to the 2001 census; which indicates a proper breakdown of balanced representation in the study.

Table 3.9 Percent distribution of the RDW by ethnicity in the baseline and follow up surveys

Ethnicity	Jhapa			Banke			Kanchanpur		
	Census	BS	FS	Census	BS	FS	Census	BS	FS
Brahmin/ Chhetri	43.1	30.3	31.4	25.4	21.4	22.7	49.9	41.2	44.7
Tibeto-Burman	17.0	15.6	13.3	6.8	5.2	6.4	4.7	5.0	4.6
Tharu	11.5	16.6	17.9	16.5	20.8	15.5	23.3	33.9	33.2
Dalit	10.0	12.7	10.9	10.2	14.4	13.6	14.3	18.4	15.4
Muslim	3.1	7.2	9.2	21.2	24.3	29.4	0.1	0.1	-
Other terai origin§	6.0	11.1	10.6	14.5	11.7	11.1	2.8	0.8	0.8
Other±	7.0	6.6	6.7	4.1	2.1	1.3	2.0	0.6	1.3
Unidentified caste	2.4	-	-	1.4	-	-	2.9	-	-
Total	**633,042**	**900**	**900**	**385,840**	**840**	**840**	**377,899**	**900**	**900**

§ Other terai origin includes: Yadav; Kumhar;, Rajbhar; Baniya; Kanu; Kurmi; Sudi; Kalwar; Teli; Kushuhawa; Other terai.

± Other includes: Sanyasi; Newar; Bhujel; Dhimal; Tajpuriya; Jabegu.

Literacy status

For this study, respondents who reported having completed primary level of education or who were able to read Nepali language fluently were defined as the literate. Table 3.10 shows the literacy status of the RDW, husbands and MIL. As one would expect, literacy was notably higher among husbands than RDW. As with other measures of socio-economic status presented earlier, Banke stands out in that literacy status in the follow-on survey was considerably better than in the baseline survey, suggesting that the samples may not have been entirely equivalent.

Table 3.10 Percentage of literate RDW, husbands and MIL by district in the baseline and follow up surveys

Respondent type and district	Baseline	Follow up
Jhapa		
RDW	57.1	59.2
Husbands	76.0	77.4
MIL	13.6	15.1
Banke		
RDW	29.4	37.0
Husbands	57.9	63.6
MIL	3.9	7.0
Kanchanpur		
RDW	45.6	45.8
Husbands	76.5	77.4
MIL	5.4	4.8

The picture for level of education is similar to that for literacy, with the follow-up sample in Banke relatively better off than in the baseline survey (Table 3.11). The majority (92%-99%) of the MIL in the study districts had not attended schooling in both surveys (table not shown).

Table 3.11 Percent distribution of RDW and husbands by their level of education in the baseline and follow up surveys

Level of education	Jhapa				Banke				Kanchanpur			
	RDW		Husband		RDW		Husband		RDW		Husband	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
No schooling	42.4	39.9	25.3	19.9	71.9	62.4	40.3	31.3	55.0	53.0	15.9	17.1
Some primary	17.9	18.3	25.7	21.6	14.2	16.1	25.5	28.7	19.7	18.4	28.7	29.1
Some secondary	28.8	30.3	29.8	35.5	12.0	17.9	28.1	27.9	21.3	22.6	43.9	34.2
SLC or above	10.9	11.4	19.2	23.0	1.9	3.7	6.1	12.1	4.0	6.0	11.4	19.5
Total (n)	**900**	**900**	**292**	**296**	**840**	**840**	**278**	**272**	**900**	**900**	**289**	**292**

b) Occupation of RDW's husbands and MIL

Information regarding the occupation of husbands and mothers-in-law of the sampled RDW was also collected in the follow up survey. The majority of the husbands (49%-59%) and mothers-in-law (64%-89%) of the RDW were engaged in agriculture. About a quarter (24%-25%) of the husbands in Jhapa and Banke, and 11% in Kanchanpur were engaged in labor (Table 3.12).

Table 3.12 Percent distribution of husbands and MIL by occupation in the follow up survey

Occupation	Jhapa		Banke		Kanchanpur	
	Husband	MIL	Husband	MIL	Husband	MIL
Agriculture	48.6	64.1	55.5	82.2	58.9	89.3
Labor	24.3	11.2	25.0	2.3	11.3	1.4
Small business – sewing, carpentry	8.1	2.4	4.4	0.4	4.8	-
Shopkeeper	7.4	4.4	6.6	1.6	9.9	2.1
Private office employee	6.1	-	2.9	-	4.5	-
Government office employee	2.0	-	5.5	-	7.2	0.3
Housewife/ household work	1.4	12.4	-	3.5	0.3	6.5
Unemployed	1.0	-	-	2.3	1.7	0.3
Incapacitated	-	4.8	-	7.8	0.7	-
Other§	1.0	0.8	-	-	0.7	
Total (n)	**296**	**251**	**272**	**258**	**292**	**291**

§ Other includes: Indian army; birth attendant; taking care of children; social service; social worker.

c) Exposure to television and radio

Both reported radio and television use increased between baseline and follow-up in all three districts, apparently reflecting some improvement in economic conditions over that period (Table 3.13).

Table 3.13 Percent distribution of the RDW, husbands and MIL by their exposure to radio and TV in the baseline and follow up surveys

Description	Jhapa						Banke						Kanchanpur					
	RDW		Husband		MIL		RDW		Husband		MIL		RDW		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Frequency of watching TV																		
Almost every day	43.8	43.4	45.2	47.0	48.9	33.5	16.7	16.4	18.3	18.0	13.8	11.6	20.2	21.3	25.6	29.1	16.9	21.6
At least once a week	17.0	20.1	16.8	20.6	16.7	25.9	7.7	13.9	17.6	29.4	9.4	10.5	14.6	17.9	27.7	25.7	10.1	16.2
Less than once a week	13.6	13.9	18.8	18.6	12.1	15.9	12.0	27.9	18.3	28.7	8.3	20.5	14.8	31.7	17.6	30.1	12.5	17.2
Not at all	25.7	22.6	19.2	13.9	22.3	24.7	63.6	41.8	45.7	23.9	68.5	57.4	50.4	29.1	29.1	15.1	60.5	45.0
Total (n)	**900**	**900**	**292**	**296**	**264**	**251**	**840**	**840**	**278**	**272**	**254**	**258**	**900**	**900**	**289**	**292**	**296**	**291**
Frequency of listening to the radio																		
Almost every day	48.4	42.1	56.5	59.1	44.7	32.3	32.1	32.4	47.5	49.3	27.6	20.9	28.7	39.7	42.2	56.5	20.3	28.5
At least once a week	16.3	22.2	17.5	17.9	19.7	29.9	14.8	22.3	18.0	22.8	19.3	20.2	17.3	24.7	24.6	24.3	18.6	28.2
Less than once a week	15.0	18.3	13.7	14.9	12.5	15.7	20.6	30.2	19.1	20.6	13.8	30.2	19.9	27.2	14.9	15.8	19.9	23.7
Not at all	20.2	17.3	12.3	8.1	23.1	22.7	32.5	15.1	15.5	7.4	39.4	28.7	34.1	8.4	18.3	3.4	41.2	19.6
Total (n)	**900**	**900**	**292**	**296**	**264**	**251**	**840**	**840**	**278**	**272**	**254**	**258**	**900**	**900**	**289**	**292**	**296**	**291**

d) Access to health facility

In both surveys, the RDW were also asked whether they had been to a health facility without receiving services in last 12 months due to absence of staff or to security issues. Staffing problems was the more common reason given and, in this respect it appears that conditions improved between baseline and follow-up. Failing to receive services due to security problems was reported by only a small number of respondents (Table 3.14).

Table 3.14 Percent distribution of RDW reporting any problems experienced to seek from health facility due to absence of health care providers or on security ground in the past 12 months in the baseline and follow up surveys

Description	Jhapa		Banke		Kanchanpur	
	Base-line (n=900)	Follow up (n=900)	Base-line (n=840)	Follow up (n=840)	Base-line (n=900)	Follow up (n=900)
Ever been unable to access health services in the past 12 months because service delivery point was not staffed						
Yes	10.6	9.7	14.6	8.3	16.3	8.7
Do not know	0.6	0.8	0.4	0.2	0.6	1.2
Ever been unable to access health services in the past 12 months because travel between home and service delivery point was unsafe						
Yes	0.7	2.3	3.7	1.5	2.2	0.4
Do not know	0.7	1.4	0.5	0.2	0.4	1.1

e) Socio-economic status (SES)

Data on selected indicators has also been analyzed in terms of the socio-economic status (SES) of the respondents, calculated as household assets wealth quintiles. The SES of the sampled households was calculated by considering specific variables such as source of drinking water, toilet facility, flooring of house, roofing, wall, and possession of household (electricity, bicycle, TV and radio). The procedure followed in calculation of this index is presented in **Annex 2**.

There was a slight difference in the SES level of the RDW of Jhapa and Kanchapur between two surveys. However, in Banke, difference in the SES was substantially high particularly among the women of the lowest and the highest SES.

Table 3.15 Distribution of RDW by their SES index in the baseline and follow up surveys

SES Index	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Lowest	19.9	15.7	34.9	26.4	11.8	12.8
Second	12.4	12.7	22.9	22.5	28.0	21.9
Middle	15.6	15.3	17.9	18.0	25.9	27.2
Fourth	20.1	22.1	15.5	18.0	20.2	23.6
Highest	32.0	34.2	8.9	15.1	14.1	14.6
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

Chapter 4

Familiarity with FCHVs and PHC ORC

Information regarding the familiarity of the RDW, husbands and MIL with the FCHVs working in their areas, including their awareness of the services provided by FCHVs, awareness of the existence of mothers groups and attendance in the such meetings are presented and described in this chapter. Information is also presented regarding use of Primary Health Care Outreach Clinics (PHC ORC). Results for CB-MNC core indicators for FCHVs and PHC ORC are listed below.

CB-MNC Core indicators for FCHVs and PHC ORC

Indicator	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Percentage of RDW who know their FCHV	77.0	92.1	91.4	96.8	94.7	98.2
Percentage of RDW who state that there is a mothers group in their area	13.3	28.2	23.1	43.6	63.2	58.8
Percentage of RDW who attended a mothers group meeting during their last pregnancy	1.7	10.1	7.5	21.1	20.6	22.3
Percentage of RDW who have heard of the PHC ORC	30.3	44.3	63.7	72.4	29.0	46.7
Percentage of RDW who know when the PHC ORC in their area is held	18.4	27.2	24.8	33.0	19.3	22.6
Percentage of RDW who used the PHC ORC prior to or following their most recent delivery for the following services:						
1. Antenatal care	12.4	25.8	35.1	56.7	16.9	30.4
2. Postnatal care for mother	3.3	4.6	13.6	20.2	6.2	11.2
3. Care for newborn child	8.3	22.9	30.4	48.5	11.0	29.3
4. Family planning information or services	3.5	6.1	9.0	15.1	5.7	6.7
5. Any service	18.0	64.9	44.6	64.6	19.8	39.0

4.1 Familiarity with FCHVs and Mother's Groups

a) Familiarity with FCHVs

All three types of respondents were asked if they knew the FCHVs working in their areas. There was an increase across all three districts, but from what were already high baseline levels (Table 4.1).

Table 4.1 Percent distribution of the RDW, husbands and MIL who know the FCHV working in their areas in the baseline and follow up surveys

Respondent type and district	Baseline	Follow up
Jhapa		
RDW	77.0	92.1
Husbands	77.1	86.8
MIL	77.7	86.1
Banke		
RDW	91.4	96.8
Husbands	93.5	94.9
MIL	94.9	95.7
Kanchanpur		
RDW	94.7	98.2
Husbands	92.4	93.8
MIL	90.9	95.2

RDW were also asked to mention the ethnicity of the FCHVs working in their areas. Recalling the caste-ethnicity status of respondents and census data (presented earlier), Brahmin/ Chhetri are somewhat over-represented among FCHVs. Although the survey results imply some shift in caste-ethnicity composition of FCHVs in these two districts, data from elsewhere suggest that turn-over has been low and the actual caste-ethnicity pattern among FCHVs in the two districts has remained quite similar. The apparent differences therefore more likely represent some difference in sampling (Table 4.2).

Table 4.2 Percent distribution of RDW who know the ethnicity of the FCHV working in their areas in the baseline and follow up surveys

Ethnicity of FCHV	Jhapa		Banke	
	Baseline	Follow up	Baseline	Follow up
Brahmin/Chhetri	45.0	59.2	18.7	26.1
Tibeto-Burman	8.6	4.4	8.1	8.9
Tharu	4.1	10.8	18.6	14.9
Dalit	5.0	2.6	13.6	9.5
Muslim	-	2.9	21.5	23.5
Other terai origin	5.7	5.0	8.9	12.3
Other	2.2	2.1	1.4	0.8
Do not know	29.4	13.0	9.2	4.0
Total (n)	**900**	**900**	**840**	**840**

In all three districts there was a significant shift in the proportion of FCHVs reported to be providing the specific services we asked about (Table 4.3).

Table 4.3 Percent distribution of RDW about types of help or services the FCHVs provide in their areas in the baseline and follow up surveys

Types of help or services FCHV provides	Jhapa		Banke		Kanchanpur	
	Base-line (n=900)	Follow up (n=900)	Base-line (n=840)	Follow up (n=840)	Base-line (n=900)	Follow up (n=900)
Health information including mothers groups	24.2	63.9	44.0	59.6	63.1	70.1
Provide advice to pregnant women	46.7	84.2	66.7	90.1	71.2	92.4
Provide advice to postpartum mother	33.6	72.4	48.9	80.8	61.6	87.0
Provide advice regarding newborn	30.2	70.9	50.7	79.4	58.6	85.3
Provide advice and treatment regarding children's diarrhea	37.8	64.9	50.7	64.2	64.4	75.1
Provide advice and treatment regarding children's respiratory infection (including pneumonia)	33.3	61.7	47.6	68.9	57.9	71.3
Supply condoms and pills	23.1	40.6	42.6	54.5	53.7	70.0
Vitamin A for mother/child	64.7	86.3	80.0	91.3	82.4	94.3
Provide HIV/AIDS/STI information	9.8	30.9	20.2	28.3	31.4	33.9
Counsel and distributes BPP Key Chain	NAP	74.6	NAP	81.3	NAP	NAP
Counsel and distributes MSC	NAP	NAP	NAP	78.5	NAP	NAP

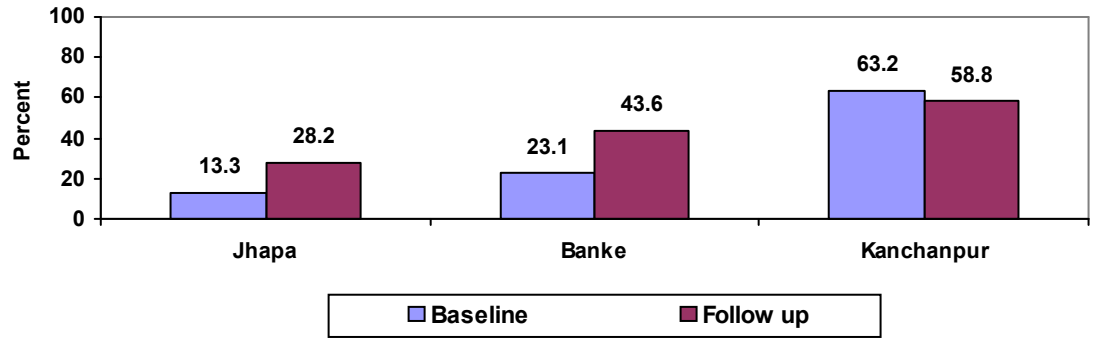
In the follow-up survey, RDW were asked whether FCHVs are paid for their services or are providing service on voluntary basis. In response, only a negligible proportion of RDW in the

three districts (1.1% in Jhapa, 3.7% in Banke and 0.9% in Kanchanpur) believed that FCHVs are paid (table not shown).

b) Familiarity with Mothers' Group

The proportion of the RDW who were aware of the existence of mothers' group in their areas nearly doubled in Jhapa and Banke (from 13% to 28% in Jhapa and from 23% to 44% in Banke) but remained relatively unchanged in Kanchanpur (where it was already high at baseline) (Figure 4.1).

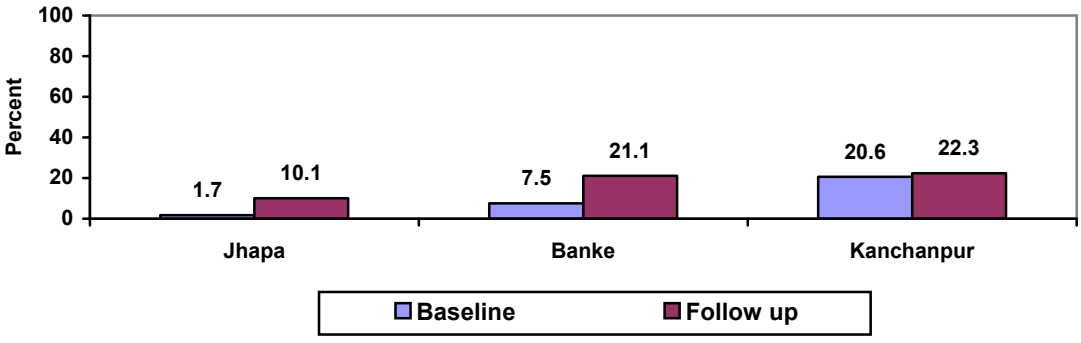
Figure 4.1 Percent distribution of the RDW by knowledge about the existence of mothers' group in their areas in the baseline and follow up surveys (% yes only)



n=900 each in Jhapa and Kanchanpur, and 840 in Banke

The proportion of RDW who reported *attending* mothers groups increased from baseline but still represents only a fairly small fraction (Figure 4.2).

Figure 4.2 Percent distribution of the RDW who attended mothers' group's meetings during last pregnancy in the baseline and follow up surveys



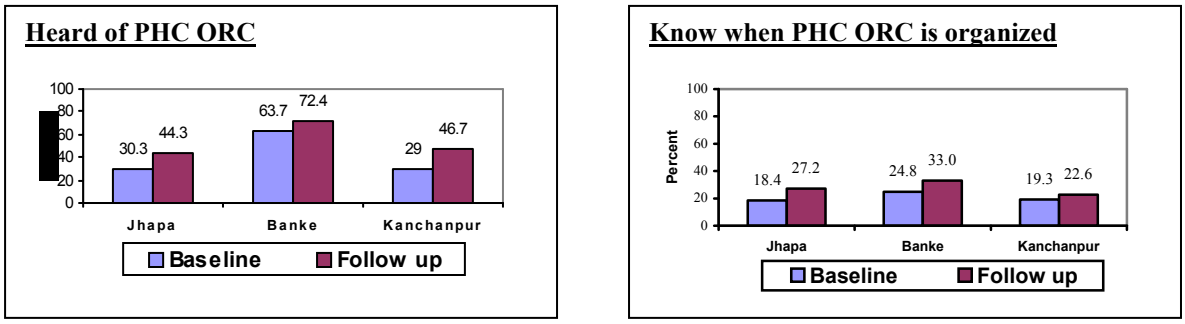
n=900 each in Jhapa and Kanchanpur, and 840 in Banke

RDW (n=163 in Jhapa; 189 Banke; and 329 Kanchanpur) who reported existence of a mother's group in their area but who did not participate in it during their last pregnancy were asked about their reasons for not doing so. A little under half said it was because they were not interested (table not shown).

4.2 Familiarity with PHC ORC

All 900 RDW in Jhapa and 840 in Banke included in the study were also asked if they had heard of the primary health care outreach clinic (PHC ORC) and if they knew the date that the clinic was scheduled in their area. Nearly half of RDW in Jhapa and Kanchanpur and about three-quarters in Banke reported to have heard of the PHC/ORC but only about a quarter correctly mentioned the day of the month the clinic is held. On each of these measures there were improvements from baseline across all 3 districts (Figure 4.3).

Figure 4.3 Percent distribution of RDW who have heard of PHC ORC and date of month the clinic is organized in their areas in the baseline and follow up surveys



N= 900 in Jhapa and Kanchanpur and 840 in Banke

Table 4.4 shows the data on the differentials on the familiarity with the PHC ORC among the women according to selected background characteristics. Improvements were seen across essentially all demographic and socio-economic strata.

Table 4.4 Percent distribution of RDW who have heard of the PHC ORC by selected background characteristics in the baseline and follow up surveys

Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	*	*	ns	ns	ns	ns
15-19	28.0	41.0	63.1	71.2	30.2	48.1
20-24	31.3	46.2	63.0	69.7	29.0	46.8
25-29	27.9	46.9	67.7	72.8	28.8	44.1
30-34	41.7	44.8	61.1	79.6	28.9	53.3
35-49	22.1	25.0	60.0	77.4	27.8	42.2
Literacy	*	*	ns	ns	ns	ns
Illiterate	24.9	33.8	63.6	74.5	29.4	48.2
Literate	34.4	51.6	64.0	68.8	28.5	44.9
Ethnicity	*	*	ns	ns	ns	ns
Brahmin/Chhetri	40.3	52.3	61.1	74.3	30.5	49.8
Tibeto-Burman	32.9	48.3	56.8	40.7	15.6	22.0
Tharu	13.4	37.3	64.6	65.4	32.5	47.2
Dalit	27.2	44.9	75.2	77.2	23.5	45.3
Muslim	15.4	13.3	63.7	79.4	ϕ	ϕ
Other terai origin	27.0	43.2	54.1	69.9	ϕ	ϕ
Other	49.2	61.7	ϕ	ϕ	ϕ	ϕ
Total (%)	**30.3†**	**44.3†**	**63.7†**	**72.4†**	**29.0†**	**46.7†**
(n)	**900**	**900**	**840**	**840**	**900**	**900**

**Significant at <.05 level ns= Not significant*
ϕ indicates that a figure is based on fewer than 25 cases and are not shown
†Pre-post (Jhapa p= 0.078; Banke p=0.356 ; and Kanchanpur p=0.052)

RDW were asked what specific services they had received from PHC ORC during or following their last pregnancy, including: antenatal care, postnatal care, care of newborn and family planning (FP) information/services. Across all four categories of care, follow-up levels of use were higher – this was particularly so for antenatal and newborn care (Table 4.5).

Table 4.5 Percent distribution of RDW who received various types of services from the PHC ORC following their most recent pregnancy in the baseline and follow up surveys

Whether used the PHC ORC at any time following your most recent delivery for any of the following services	Jhapa		Banke		Kanchanpur	
	Baseline (n=900)	Follow up (n=900)	Baseline (n=840)	Follow up (n=840)	Baseline (n=900)	Follow up (n=900)
Antenatal care	12.4	25.8	35.1	56.7	16.9	30.4
Postnatal care for mother	3.3	4.6	13.6	20.2	6.2	11.2
Care for newborn child	8.3	22.9	30.4	48.5	11.0	29.3
FP information or services	3.4	6.1	9.0	15.1	5.7	6.7
At least one of the above	***18.0***	***35.1***	***44.6***	***64.4***	***19.8***	***39.0***

Chapter 5

Marriage, Fertility and FP Use by RDW

Although CB-MNC has given relatively little attention to fertility and its determinants such as age at marriage or use of family planning (FP), these issues have been addressed in these surveys and do provide useful background information on the respondents. This chapter presents information on age at marriage, fertility, knowledge and use of FP methods following the birth of the last child, as well as respondents' experience with interpersonal communication and counseling on FP. Results for key CB-MNC core indicators are included in the table below.

CB-MNC Core indicators for marriage, fertility and FP use by RDW

Indicator	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Percentage of children less than 1 year old whose birth is registered with VDC, among women whose last child is alive	26.3	35.0	18.7	44.2	11.9	16.2
Percentage of RDW who were counseled by FCHVs to use birth spacing or FP at any time after their most recent delivery among women who delivered between 2-11 months prior to the survey.	14.2	38.5	22.9	48.0	29.9	46.0
Percentage of RDW who are currently using a modern FP method among women who delivered between 6-11 months prior to the survey and who were not currently pregnant.	39.3	38.2	26.8	25.8	38.5	35.3

5.1 Marriage, pregnancy and fertility

Between-district differences in mean age at marriage and at first pregnancy to some extent reflect differences in socio-economic conditions. By these measures, Jhapa has a relatively advantaged population. Furthermore these measures also reflect differences in health risks. With a smaller proportion of pregnancies at a very early age, risks for maternal and neonatal death would be expected to be lower (Table 5.1).

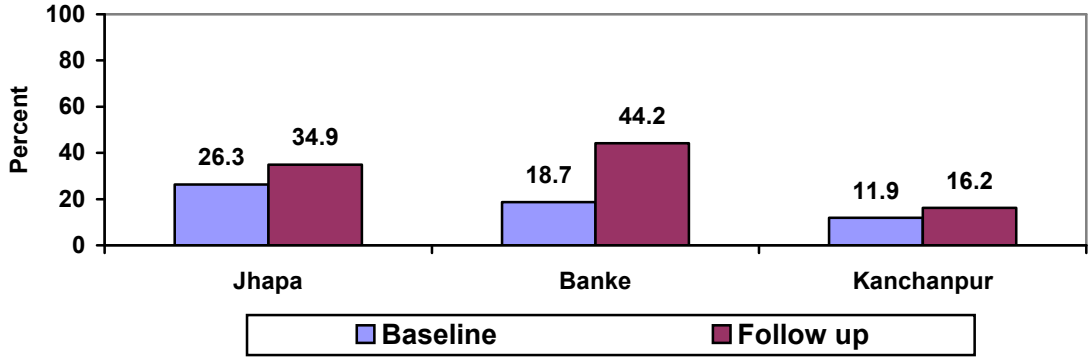
Table 5.1 Percent distribution of RDW by age at first marriage and first pregnancy, mean times of pregnancy and mean currently living children in the baseline and follow up surveys

Description	Jhapa		Banke		Kanchanpur	
	Base-line (n=900)	Follow up (n=900)	Base-line (n=840)	Follow up (n=840)	Base-line (n=900)	Follow up (n=900)
Mean age at marriage (years)	18.4	18.1	16.1	16.7	17.0	17.2
Mean age first pregnancy (years)	20.0	20.1	18.2	18.7	18.5	18.7
Mean number of times of pregnancy	2.4	2.2	3.1	2.8	2.9	2.7
Mean number of currently living children	2.1	2.1	2.7	2.5	2.5	2.4

Birth registration

Information regarding the civil registration status of the children (less than one year old and alive at the time of survey) was also collected during the survey. In all districts the proportion registered increased from baseline, though only in Banke was there a large gain (Figure 5.1).

Figure 5.1 Percent distribution of RDW by birth registration status of the newborn (with the VDC)



n= Jhapa (871 in BS and 882 in FS); Banke (802 in BS and 815 in FS); and Kanchanpur (885 in BS and 900 in FS)

RDW in Banke were also asked whether FCHVs had assisted in this process by recording the birth. Almost half (45%) reported that they had been. Those newborns whose births were recorded and who had been given a slip by the FCHV were also far more likely to have been registered at the VDC (table not shown).

5.2 Knowledge of FP methods

One element of CB-MNC has been FCHV counseling on postpartum family planning. RDW were asked to name all the FP methods that they had ever heard of. This question was a prompted question, administered by having the surveyor read the list of methods to the RDW. Female and male sterilization, oral pills, injection and condoms were widely known at baseline; more than nine in every 10 respondents in all three districts reported having heard about these methods, with some further increases at follow-up documented for Kanchanpur. Knowledge of other methods was somewhat less widespread but improved in all three districts.

Table 5.2 Percent distribution of RDW by knowledge of different FP methods in the baseline and follow up surveys

Type of FP methods heard of	Jhapa		Banke		Kanchanpur	
	Baseline (n=900)	Follow up (n=900)	Baseline (n=840)	Follow up (n=840)	Baseline (n=900)	Follow up (n=900)
Injection	97.9	97.3	97.5	98.8	94.7	98.1
Female sterilization	95.9	96.2	97.9	98.1	92.7	99.6
Male sterilization	92.6	93.9	96.9	96.1	90.3	98.9
Condom	91.4	91.4	95.2	99.3	96.1	99.4
Pill	91.1	90.0	93.8	95.7	86.3	95.2
Norplant	82.4	80.6	79.8	86.7	71.2	85.0
IUD	69.0	73.8	64.6	75.7	56.0	78.6
Periodic abstinence	45.9	57.6	40.7	54.5	28.9	47.9
Withdrawal	35.7	54.0	28.1	55.2	23.2	44.4

5.3 Current use of FP methods

RDW whose most recent delivery took place between six and eleven months prior to the survey and who were not currently pregnant were asked if they or their husbands were currently doing something or using any method to delay or avoid pregnancy. No change was observed between baseline and follow-up.

Table 5.3 Percent distribution of RDW (whose most recent delivery occurred between six and eleven months prior to the survey and who were not currently pregnant) currently using any FP methods in the baseline and follow up surveys

Method currently using	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Female sterilization	8.2	8.1	4.3	2.5	7.2	3.1
Male sterilization	0.2	0.2	0.4	0.2	1.3	0.2
Pill	2.7	4.4	3.2	1.3	3.0	2.2
IUD	0.5	0.2	0.2	-	-	0.2
Depo-Provera	20.5	17.0	10.6	12.8	9.5	8.4
Norplant	-	0.2	0.2	0.2	0.2	0.2
Condom	7.3	8.1	7.8	8.8	17.3	20.9
Periodic abstinence	1.4	1.5	1.9	4.0	-	0.4
Withdrawal	1.8	6.2	0.6	0.8	0.8	3.1
Any method	***42.5***	***45.9***	***29.4***	***30.6***	***39.3***	***38.9***
Any modern method	***39.3***	***38.2***	***26.8***	***25.8***	***38.5***	***35.3***
Total (n)	**440**	**481**	**463**	**477**	**473**	**450**

Differentials on the current use of FP methods according to the selected background characteristics of the RDW (whose most recent delivery occurred between six and eleven months prior to the survey who were not currently pregnant) are presented in Table 5.4. Younger and literate women were more likely to use contraceptives. Use of contraceptives was much higher among Tharu women in all three districts. Women of higher SES were more likely to use contraceptives than those of lower SES.

Table 5.4 Percent distribution of RDW (whose most recent delivery occurred between six and eleven months prior to the survey who were not currently pregnant) currently using FP methods by their selected background characteristics

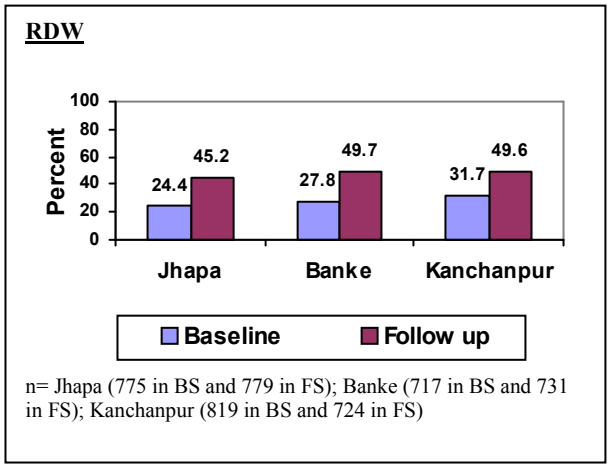
Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	ns	*	ns	ns	*	ns
15-19	44.0	42.1	31.9	35.5	44.6	43.1
20-24	41.9	42.5	33.3	29.1	43.7	42.3
25-29	45.8	52.7	27.6	30.2	36.8	39.8
30-34	38.5	53.0	25.8	30.4	30.8	28.0
35-49	33.3	27.3	18.9	32.4	19.4	20.0
Literacy	*	*	*	*	*	ns
Illiterate	36.8	38.3	25.8	25.7	34.7	35.2
Literate	46.7	51.6	38.0	39.8	44.6	43.8
Ethnicity	*	ns	*	ns	ns	*
Brahmin/Chhetri	47.3	45.8	39.2	34.7	33.3	35.4
Tibeto-Burman	40.7	51.7	ϕ	20.7	ϕ	ϕ
Tharu	35.7	55.3	39.8	39.2	46.9	53.9
Dalit	53.4	43.4	15.9	31.3	37.5	20.0
Muslim	17.9	24.4	21.5	22.5	ϕ	ϕ
Other terai origin	39.2	39.6	22.2	36.8	ϕ	ϕ
Other	46.4	54.3	ϕ	ϕ	ϕ	ϕ
Number of living children	ns	ns	*	ns	ns	*
<2 children	42.2	40.8	39.7	28.6	41.0	47.8
2-3 children	42.0	51.8	26.4	33.0	41.2	37.9
4 children or more	45.5	40.4	24.3	29.1	33.3	27.1
SES Index	ns	ns	ns	*	ns	ns
Lowest	37.6	36.2	27.0	19.7	31.1	29.9
Second	38.2	40.2	23.6	24.5	40.7	31.5
Middle	50.0	49.0	35.2	36.5	38.2	38.0
Fourth	40.9	53.1	28.4	27.7	46.2	46.9
Highest	46.7	50.0	34.2	41.9	38.5	48.8
Total (%)	**42.5†**	**45.9†**	**29.4†**	**30.6†**	**39.3†**	**38.9†**
(n)	**440**	**481**	**463**	**477**	**473**	**450**

**Significant at <.05 level ns= Not significant*
ϕ Indicates that a figure is based on fewer than 25 cases and are not shown
†Pre-post (Jhapa p= 0.417; Banke p=0.775; and Kanchanpur p=0.924)

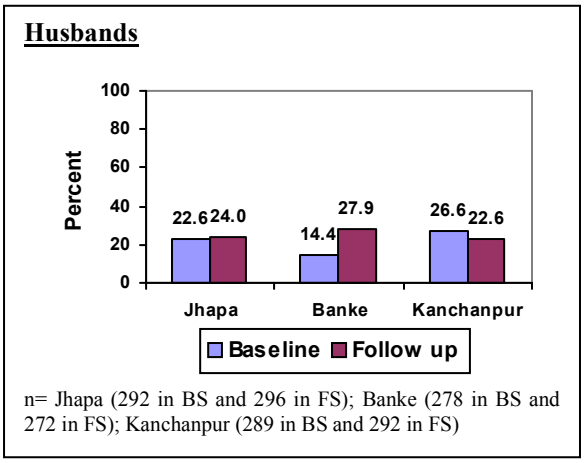
5.4 Interpersonal communication and counseling on FP

All the RDW (among those whose most recent delivery took place between two and eleven months prior to the survey) and husbands were asked whether a health worker or FCHV counseled them on birth spacing or FP at any time following their most recent delivery. There was a notable increase (by 18-22 percentage points) since the BS in the proportion of RDW who reported receiving such counseling. Husbands also reported increases in such counseling in Banke – but there was little observed change in the other two districts (Figure 5.2).

Figure 5.2 Percent distribution of RDW (among those whose most recent delivery took place between two and eleven months prior to the survey) and husbands counseled by a health worker or FCHV on birth spacing or FP at any time following their most recent delivery in the baseline and follow up surveys



n= Jhapa (775 in BS and 779 in FS); Banke (717 in BS and 731 in FS); Kanchanpur (819 in BS and 724 in FS)



n= Jhapa (292 in BS and 296 in FS); Banke (278 in BS and 272 in FS); Kanchanpur (289 in BS and 292 in FS)

Early postpartum counseling on FP increased significantly, with FCHVs as the most important source (Table 5.5).

Table 5.5 Percent distribution of RDW (among those whose most recent delivery took place between two and eleven months prior to the survey) and husbands by time at which they were first counseled on birth spacing or FP following the birth of the recent child and person providing counseling in the baseline and follow up surveys

Description	Jhapa				Banke				Kanchanpur			
	RDW		Husband		RDW		Husband		RDW		Husband	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Time of counseling for the first time												
Same week	17.5	27.0	12.1	21.1	2.5	9.4	10.0	13.2	2.7	**28.7**	-	15.2
1-3weeks	26.5	31.3	22.7	22.5	19.6	35.8	22.5	39.5	23.5	39.0	26.0	34.8
4-7 weeks	27.5	23.0	24.2	31.0	36.2	38.8	35.0	30.3	37.3	19.8	36.4	34.8
8 weeks +	27.5	17.9	34.8	25.4	37.7	15.4	27.5	17.1	34.2	10.9	37.7	12.1
Mean	**5.5**	**4.8**	**6.4**	**6.1**	**7.1**	**4.7**	**6.4**	**3.8**	**6.5**	**2.9**	**7.8**	**3.6**
SD	**5.5**	**5.4**	**6.2**	**7.7**	**5.5**	**5.0**	**5.9**	**3.3**	**5.9**	**3.9**	**7.6**	**3.3**
Do not know	1.1	0.9	6.1	-	4.0	0.6	5.0	-	2.3	1.7	-	3.0
Total (n)	**189**	**352**	**66**	**71**	**199**	**363**	**40**	**76**	**260**	**359**	**77**	**66**
Person who provided counseling												
Doctor	10.6	9.9	16.7	16.9	4.0	2.2	5.0	3.9	1.2	1.4	5.2	6.1
Nurse/ANM	21.7	10.2	13.6	12.7	4.0	4.7	5.0	1.3	9.6	8.1	9.1	6.1
HA/AHW	11.6	3.7	22.7	14.1	3.5	0.3	17.5	10.5	3.1	1.4	10.4	4.5
MCHW	3.2	6.5	3.0	2.8	26.6	8.0	2.5	5.3	5.8	2.5	-	1.5
VHW	1.6	0.3	6.1	2.8	4.5	1.7	2.5	2.6	0.4	1.4	1.3	3.0
FCHV	44.4	66.8	27.3	47.9	53.8	82.4	55.0	73.7	78.8	83.6	57.1	74.2
Other§	6.4	2.6	10.6	2.8	3.5	0.9	12.5	2.6	1.2	1.2	16.9	4.5
Do not remember	0.5	-	-	-	-	-	-	-	-	0.6	-	-
Total (n)	**189**	**352**	**66**	**71**	**199**	**363**	**40**	**76**	**260**	**359**	**77**	**66**

§ Other includes: TTBA; TBA; sister; friends; medical shopkeeper; family members.

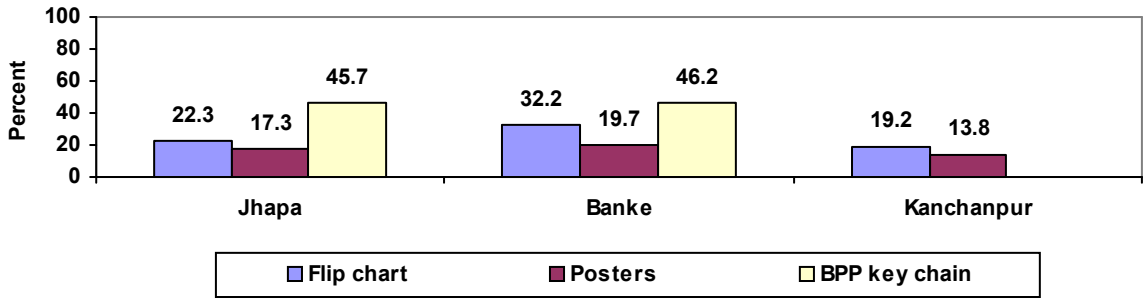
Though FCHV post-partum *counseling* on FP increased, there was no corresponding increase in provision of FP *services* (Table 5.6), in fact if anything provision of pills and condoms appears to have dropped somewhat.

Table 5.6 Percent distribution of RDW by type of FP information and services received from FCHVs following their most recent delivery among RDW who reported receiving any type of information and services and whose most recent delivery occurred between two and eleven months prior to the survey in the baseline and follow up surveys

Type of FP information and services received	Jhapa		Banke		Kanchanpur	
	Baseline (n=110)	Follow up (n=300)	Baseline (n=164)	Follow up (n=351)	Baseline (n=245)	Follow up (n=333)
FP counseling	70.9	84.0	76.8	94.3	75.1	86.2
Gave condoms	15.5	12.7	20.1	14.2	33.5	14.4
Gave pills	14.5	12.3	15.9	2.6	19.2	4.5
Referred for FP services	34.5	46.0	26.2	20.8	22.0	11.7

FCHVs use various job-aids when doing counseling. In Banke and Jhapa the BPP key chain was the main tool used for post-partum FP counseling (Figure 5.3).

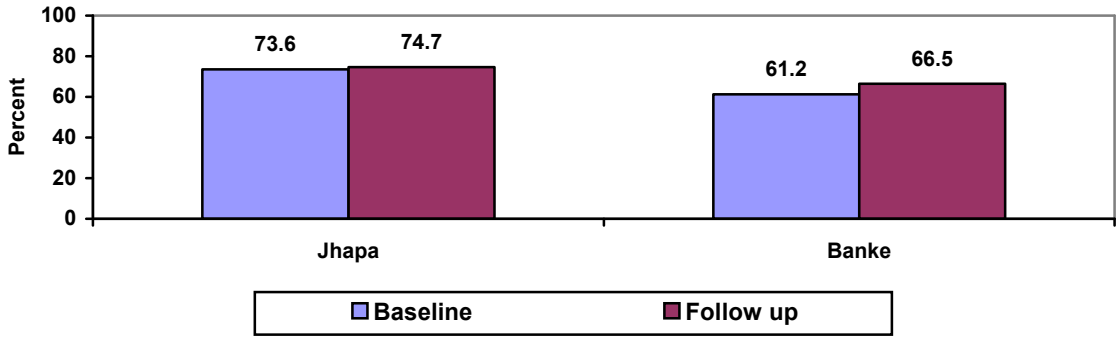
Figure 5.3 Percentage distribution of RDW who were counseled in FP by FCHVs following their most recent delivery (among those whose most recent delivery took place between 2-11 months prior to the survey) in the follow up survey



n= 300 in Jhapa; 351 in Banke and 333 in Kanchanpur

The husbands of the RDW were also asked if they discussed FP with their wives after the most recent delivery. In response, nearly three-quarters of husbands in Jhapa and about two-thirds in Banke reported such discussions. These figures were slightly higher at follow-up than at baseline (Figure 5.4).

Figure 5.4 Percent distribution of respondents (husbands of RDW) who discussed the practice of FP with their wife after following her recent birth in the baseline and follow up surveys



n= Jhapa (292 in BS and 296 in FS); Banke (278 in BS and 272 in FS)

Husbands' opinions on contraception and pregnancy were also sought during the study. The proportion who felt that contraception was only the woman's business was low at baseline in all three districts and remained so. In Banke and Jhapa, husbands were also asked if they had discussed family planning with their wives after the last delivery. Most had at baseline (74% in Jhapa and 61% in Banke) and levels remained similar at follow-up.

Table 5.7 Percent distribution of husbands of RDW by opinion regarding contraception and pregnancy in the baseline and follow up surveys (% agree only)

Description	Jhapa		Banke		Kanchanpur	
	Base-line (n=292)	Follow up (n=296)	Base-line (n=278)	Follow up (n=272)	Base-line (n=289)	Follow up (n=292)
Contraception is women's business and a man should not have to worry about it	5.5	8.1	9.0	3.7	5.2	4.8
A woman is the one who gets pregnant so she should be the one to use contraception	4.8	10.5	11.9	5.5	8.7	3.8

Chapter 6

Antenatal Care and Delivery Services

One of the objectives of CB-MNC was to increase awareness about the importance of safe motherhood services and encourage people to use such services. Information related to knowledge of antenatal and delivery services, danger signs associated with pregnancy and delivery, attitudes on antenatal and delivery services, and utilization of these services was collected from recently delivered women (RDW), husbands and mothers-in-law (MIL). In addition, information on exposure to BCC materials on safe motherhood was also collected. Results for key CB-MNC Core Indicators are included below.

CB-MNC Core Indicators for antenatal care and delivery services

Indicator	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Percentage of RDW who met FCHVs during their last pregnancy	24.0	75.2	34.9	89.3	47.7	77.7
Percentage of RDW who attended a mothers group meeting during their last pregnancy	1.7	10.1	7.5	21.1	20.6	22.3
Percentage of RDW who used the PHC ORC prior to or following their most recent delivery for ANC	12.4	25.8	35.1	56.7	16.9	30.4
Percentage of RDW who know at least **three** danger signs during pregnancy	25.9	54.3	45.4	86.9	16.6	66.6
Percentage of RDW who know at least **three** danger signs during delivery among RDW with live birth	52.4	70.2	64.0	92.8	16.0	58.9
Percentage of RDW who received prenatal care at least one time by a trained provider during last pregnancy	74.2	88.3	77.0	91.4	81.0	87.9
Percentage of RDW who received at least two doses of TT during last pregnancy (based on recall)	62.0	77.7	77.4	92.1	76.6	80.0
Percentage of RDW who received/bought iron supplements while pregnant.	68.1	90.3	72.9	93.9	80.0	90.7
Percentage of RDW who received/bought deworming tablets while pregnant.	25.4	73.0	29.2	81.1	51.3	77.1
Percentage of RDW who can identify a SBA who will attend a delivery in their home among RDW with live birth	20.6	21.4	4.2	9.5	15.6	19.1
Percentage of RDW who made preparations for delivery: • Any type of preparation • At least two types of preparation from points 1-7	 67.9 51.1	 87.3 77.7	 72.1 49.0	 86.4 79.9	 68.0 50.6	 83.1 72.2
Percentage of RDW who arranged for a SBA (doctor, nurse or ANM) to attend their last delivery	5.9	13.6	3.0	6.8	4.2	6.6
Percentage of RDW whose birth was attended by a skilled provider among RDW with live birth	36.3	45.3	10.6	17.1	17.1	23.9
Percentage of RDW who made preparations for emergencies: • Any type of preparation • At least two types of preparation from points 1-5	 48.7 10.4	 66.8 21.9	 60.0 4.4	 69.3 41.5	 38.3 10.4	 69.8 23.8

6.1 Knowledge about antenatal care

Knowledge about ANC

It is recommended that a woman should have at least four health check-ups by a health worker during her pregnancy. All the three types of respondents (RDW, husbands and MIL), were asked about the number of check-ups that a woman should have. Table 6.1 shows a marked increase

between the baseline and follow up. The RDW were also asked if they had heard the message "*A pregnant woman should have her health checked four times by a trained health worker*". The proportion of RDW reporting exposure to this message was much higher in the follow up survey than that at baseline The main sources reported for this message were - FCHVs (64%-83%), health workers (36%-57%), and friends (22%-44%).

Table 6.1 Percent distribution of RDW reporting the number of times a woman should receive check ups from a trained health workers during pregnancy and the sources of the messages in the baseline and follow up surveys

Description	Jhapa		Banke		Kanchanpur	
	Baseline (n=900)	Follow up (n=900)	Baseline (n=840)	Follow up (n=840)	Baseline (n=900)	Follow up (n=900)
Number of check ups a woman should have with a trained health worker						
1	0.6	0.6	1.7	0.2	1.0	0.7
2	3.0	1.0	4.9	0.6	6.3	1.9
3	15.1	7.8	10.8	1.9	11.8	4.4
4	29.8	64.9	34.2	84.2	45.4	67.0
5 +	24.2	16.2	14.9	4.4	14.3	13.8
Do not know	27.3	9.6	33.6	8.7	21.1	13.8
Heard the message "A pregnant woman should have her health checked four times by a trained health worker" (Multiple Response)						
From FCHV	13.1	64.1	23.8	83.1	40.0	69.8
From health worker	17.8	43.0	20.5	56.8	17.3	36.0
From friends	17.6	22.1	7.0	43.6	9.6	24.3
Radio	26.1	21.2	18.0	12.9	12.8	24.4
TV	14.6	15.7	3.9	3.6	4.2	8.6
Other§	2.2	12.8	2.7	6.4	1.9	3.2
Have not heard the message	47.4	14.7	51.3	7.0	37.2	14.7

§ Other includes: poster; pamphlet; newspaper; magazine; sister in-law; Forest Users' Group; meeting on child health; hoarding board; mother's group meeting; family members; husband; book; TBA;/relatives.

Among mothers-in-law and husbands, in Banke there was a marked increase in those reporting four ANC visits are necessary; in Jhapa there was a more modest increase. In Kanchanpur, there was little change. These findings were matched by equivalent differences in the proportions reporting having been exposed to these messages with, for example, husbands and mothers-in-law in Banke much more exposed to this message in the follow-up survey than at baseline - and with both groups reporting FCHVs as the principal source for the message (table not shown).

Knowledge about symptoms during pregnancy indicating the need to seek immediate care

Table 6.2 presents the level of awareness among RDW about pregnancy-related symptoms requiring immediate care from a health worker. RDW from all three districts were found to be more aware of danger signs at follow-up than baseline. The most frequently cited danger signs requiring immediate care were: vaginal bleeding (71%-91%), severe lower abdominal pain

(81%-89%), severe headache (56%-76%), convulsions (24%-42%) and blurred vision and swelling of hands and face (23%-51%). Knowledge about the above symptoms was higher among the respondents from Banke than those from Jhapa and Kanchanpur. Overall, the percentage of RDW able to mention at least three pregnancy-related danger signs increased from 26% to 54% in Jhapa, from 46% to 87% in Banke, and from 17% to 67% in Kanchanpur.

Table 6.2 Percent distribution of RDW by knowledge about signs and symptoms during pregnancy indicating the need to seek immediate care in the baseline and follow up surveys

Type of signs and symptoms during pregnancy that need to seek immediate care (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Vaginal bleeding (any amount)	50.4	71.4	64.5	91.0	56.8	81.8
Severe lower abdominal pain	70.3	80.7	88.3	83.8	76.1	88.8
Severe headache	33.1	56.4	45.4	75.7	24.2	57.6
Convulsion	10.8	27.9	15.2	41.8	11.7	24.4
Blurred vision and swelling of hands and face	25.8	23.3	25.6	50.7	11.6	34.6
White fluid discharge/ vaginal discharge with foul smell	4.8	7.4	2.7	0.8	1.7	2.1
Fever	3.4	3.4	6.2	2.7	3.3	2.9
Dizziness	1.3	3.0	3.6	1.7	1.3	0.4
No movement of fetus in the womb	5.8	2.2	3.1	1.0	2.7	2.6
Nausea/vomiting	3.0	2.0	2.5	0.8	1.9	1.8
Poor appetite	4.0	2.0	0.5	0.2	0.9	0.6
Other§	7.5	4.2	9.8	2.4	9.6	3.9
Do not know	8.6	2.0	3.3	0.6	7.7	1.7
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

§ *Other includes: abnormal position of fetus; back pain; waist pain; pain in legs and hands; swelling in hands and feet; body swelling; difficult urination; weakness; fetal death; diarrhea; urination more frequently; blurred vision; anemia; chest indrawing; nasal or oral bleeding; headache; high blood pressure.*

Table 6.3 presents awareness of pregnancy-related danger signs among husbands and MIL. Across all three districts, there were improvements among both groups. As with RDW, the most commonly known dangers signs were: vaginal bleeding, severe lower abdominal pain, severe headache, convulsions and blurred vision and swelling of hands and face.

Table 6.3 Percent distribution of husbands and MIL by knowledge about symptoms during pregnancy indicating the need to seek immediate care in the baseline and follow up surveys

Type of symptoms during pregnancy that need to seek immediate care (Multiple Response)	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Vaginal bleeding (any amount)	39.0	53.0	53.8	61.4	40.3	73.5	60.6	85.3	40.8	67.8	44.3	73.5
Severe lower abdominal pain	62.3	67.6	71.2	72.9	65.5	79.8	83.9	80.6	59.9	80.5	64.2	79.0
Severe headache	29.8	50.3	37.1	46.6	28.1	62.9	35.8	57.0	19.7	47.9	22.6	39.2
Convulsion	11.3	20.9	8.7	15.9	6.8	25.4	12.6	23.6	8.3	14.0	10.5	15.1
Blurred vision and swelling of hands and face	15.1	16.9	22.0	15.9	14.7	36.0	17.7	44.6	4.8	18.8	6.8	27.8
White fluid discharge/ vaginal discharge with foul smell	2.1	1.7	1.5	5.6	1.4	-	1.2	0.8	0.7	1.4	0.7	1.0
Fever	5.5	8.4	4.9	4.0	6.8	2.9	3.9	1.6	5.2	2.1	2.7	2.1
Dizziness	2.4	1.0	2.7	-	1.4	-	1.2	0.4	1.4	-	-	0.3
No movement of fetus in the womb	1.7	1.4	2.7	8.0	1.8	0.7	2.4	1.6	-	1.0	1.0	1.0
Nausea/vomiting	5.5	4.1	2.7	3.2	3.2	-	1.2	0.4	2.1	-	1.7	3.8
Poor appetite	1.7	2.4	3.4	2.8	-	0.7	-	0.4	0.3	0.7	-	1.4
Other	8.2	7.1	5.7	5.6	5.4	0.4	6.7	1.6	4.4	1.4	8.1	4.1
Do not know	19.5	12.8	10.6	7.6	22.7	5.5	5.9	3.5	25.6	10.3	18.9	6.9
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**

§ *Other includes: abnormal position of fetus; back pain; waist pain; pain in legs and hands; swelling in hands and feet; body swelling; difficult urination; weakness; fetal death; diarrhea; urination more frequently; blurred vision; anemia; chest indrawing; nasal or oral bleeding; headache; high blood pressure.*

6.2 Prevalence of danger signs during pregnancy

During both the baseline and follow up survey, RDW were also asked if they had experienced any danger signs during their last pregnancy. The major possible problems that could appear during pregnancy were read out by the interviewer. The results are presented in Table 6.4. The most frequency cited problems reported in the follow up survey were severe lower abdominal pain (23% in Jhapa, 18% in Banke, and 22% in Kanchanpur), severe headache (20% in Jhapa, 12% in Banke, and 10% in Kanchanpur), blurred vision (13% in Jhapa and Banke, and 9% in Kanchanpur) and swelling of the hands, body or face (15% in Jhapa, 9% in Banke and Kanchanpur). The percentage of RDW experiencing such problems declined in all three districts. The proportion of RDW experiencing at least one of the pregnancy related problems during last pregnancy declined from 48% in the baseline to 42% in the follow up survey in Jhapa, 47% to 32% in Banke, and 48% in the baseline to 35% in the follow up survey in Kanchanpur district. The reasons for this apparent decline are not clear.

Table 6.4 Percent distribution of RDW experiencing different types of pregnancy related problems during their last pregnancy in the baseline and follow up surveys

Types of problems experienced during pregnancy	Jhapa		Banke		Kanchanpur	
	Baseline (n=900)	Follow up (n=900)	Baseline (n=840)	Follow up (n=840)	Baseline (n=900)	Follow up (n=900)
Blurred vision	19.4	13.2	16.8	12.9	23.3	8.7
Severe lower abdominal pain	26.2	22.6	28.2	18.0	30.9	21.9
Severe headache	21.3	19.7	21.5	11.8	21.7	10.1
Convulsion	7.3	6.6	4.4	3.7	11.4	4.6
Swelling of the hands, body or face	17.8	15.1	11.7	9.0	18.7	9.1
Any vaginal spotting or bleeding	2.8	3.2	4.3	2.3	5.9	2.6
At least one of the above	***47.6***	***42.2***	***46.7***	***31.8***	***47.8***	***34.6***

On where they actually sought treatment for pregnancy-related problems, at the time of the follow up survey, two-fifths (36%-48%) of RDW in all three districts mentioned peripheral public sector facilities (PHCC, HP or SHP). Such care-seeking from HF increased slightly between baseline and follow-up in Banke and Kanchanpur (but not in Jhapa). The percentage of RDW who sought care for pregnancy related problems from FCHVs increased markedly across all three districts, but this source of care was still used much less frequently than HFs, even at follow-on (Table 6.5).

Table 6.5 Percent distribution of RDW by place of visit or persons consulted for the management of problems during their last pregnancy in the baseline and follow up surveys

Places visited or person consulted for the problems (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
PHCC /HP/ SHP	36.4	36.3	27.3	36.0	40.2	48.2
Private clinic/ nursing home	15.9	16.8	9.9	10.9	6.3	8.4
Hospital	9.8	10.3	14.8	15.0	16.3	21.2
Bought medicine from pharmacy	7.5	7.4	16.1	12.7	5.3	7.4
Consulted FCHV	3.3	7.4	5.9	18.7	7.2	12.9
Consulted relative/ neighbor/ friend	6.1	7.1	4.3	12.4	6.7	22.2
Traditional treatment at home	4.2	6.8	7.4	12.4	5.6	6.8
Consulted dhami / jhankri	5.4	6.3	2.8	3.0	3.5	2.6
Consulted other HW	2.3	2.6	2.0	2.2	1.6	1.6
Given medicine at home	1.2	2.1	1.8	6.4	2.8	0.3
Consulted MCHW	0.2	1.1	2.6	5.6	1.6	0.6
Other§	0.9	1.5	0.5	1.1	2.3	2.9
Nothing	26.6	25.8	27.6	25.8	23.0	10.9
Total (n)	**428**	**380**	**392**	**267**	**430**	**311**

§ Other includes: consulted TBA; Gaon Ghar Clinic; FPAN; medical shop; vaidya.

All three types of respondents were also asked to mention the *places* where one could go to consult health personnel in case of pregnancy-related danger signs. In every district, the most common response was 'hospital' and this response was considerably more common at follow-up than at baseline. Subhealth post (31%-49%) and private clinic or nursing home (21%-37%) were the second and third most commonly mentioned sources (Table 6.6).

Table 6.6 Percent distribution of RDW by knowledge about the places for consultation for danger signs that may appear during pregnancy in the baseline and follow up surveys

Knowledge about the places for health services for danger signs during pregnancy (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Hospital	26.0	45.9	45.0	77.6	29.6	73.3
PHCC	27.3	33.8	3.7	7.6	29.0	29.2
Health post	17.6	19.0	23.9	32.0	36.6	37.8
Sub-health post	23.2	31.2	41.1	49.3	25.2	31.4
PHC/OR clinic	0.9	5.2	3.8	15.5	2.4	7.1
Private clinic/nursing home	24.1	37.3	22.3	24.3	8.0	21.3
Other§	3.4	1.9	10.5	11.1	6.7	8.1
No where	0.2	-	-	-	-	-
Do not know	-	-	0.2	-	0.3	0.1
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

§ Other includes: CMA or ANM from medical store; medical shopkeeper; FPAN; Marie Stopes; immunization center; MCHW; Immunization center; FCHV; traditional healers.

Husbands and MIL were also asked where one could go to consult health workers in case of pregnancy-related danger signs and their responses were similar to those of RDW (table not shown).

6.3 Use of ANC

Utilization of ANC

Overall, at follow-up, 91% of the RDW in Jhapa, 97% in Banke and 92% in Kanchanpur reported having received antenatal care (ANC) during their last pregnancy. This represents a significant improvement from baseline in all three districts (Table 6.7).

Table 6.7 Percent distribution of RDW who received ANC during their last pregnancy by selected background characteristics in the baseline and follow up surveys

Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	*	*	*	ns	*	*
15-19	85.0	93.2	90.8	96.6	83.6	96.9
20-24	83.1	94.6	82.6	98.3	88.4	95.4
25-29	77.5	91.5	77.9	96.9	83.3	92.2
30-34	66.7	87.6	76.1	94.6	69.9	91.1
35-49	52.9	65.4	66.7	95.2	59.3	55.6
Literacy	*	*	*	ns	*	*
Illiterate	59.1	82.3	74.4	96.4	76.9	88.3
Literate	91.6	97.0	94.7	98.1	90.2	97.1
Ethnicity	*	*	ns	ns	ns	*
Brahmin/ Chhetri	96.0	97.9	88.3	97.4	86.3	95.5
Tibeto-Burman	82.1	88.3	86.4	92.6	86.7	97.6
Tharu	57.0	90.7	78.3	96.9	78.0	88.3
Dalit	69.3	92.9	80.2	98.2	84.9	89.9
Muslim	58.5	66.3	72.5	96.8	ϕ	ϕ
Other terai origin	68.0	90.5	79.6	97.8	ϕ	ϕ
Other	88.1	96.7	ϕ	ϕ	ϕ	ϕ
Number of living children	*	*	*	ns	*	*
<2 children	91.6	95.4	88.9	97.6	90.2	96.4
2-3 children	75.0	93.2	83.5	97.9	84.3	94.8
4 children or more	45.2	66.4	65.6	94.3	69.9	79.7
SES Index	*	*	*	*	*	*
Lowest	54.0	80.9	71.4	96.8	67.5	86.4
Second	68.5	84.0	72.6	95.3	78.4	88.8
Middle	83.6	92.9	84.8	94.6	86.5	92.9
Fourth	90.8	95.4	85.9	98.3	89.7	96.2
Highest	95.8	100.0	91.7	99.5	92.0	97.7
Total (%)	**77.7†**	**91.0†**	**80.4†**	**97.0†**	**83.0†**	**92.3†**
(n)	**900**	**900**	**840**	**840**	**900**	**900**

**Significant at <.05 level* *ns= Not significant*

ϕ indicates that a figure is based on fewer than 25 cases and are not shown

†Pre-post (Jhapa p= 0.001; Banke p=0.000; and Kanchanpur p=0.000)

RDW were also asked about what health workers provided them ANC services. Nurses, ANMs and MCHWs were the most frequently mentioned. In Kanchanpur and Banke, many RDW also reported FCHVs as a source of ANC care. The percentage of RDW who received pre-natal care at least one time from the trained providers (such as doctor, staff nurse, ANM, HA/AHW, or MCHW) increased from 74% at baseline to 88% at follow-up in Jhapa, from 77% to 91% in Banke and from 81% to 88% in Kanchanpur.

Table 6.8 Percent distribution of RDW mentioning the places from where they got ANC during their last pregnancy in the baseline and follow up surveys

Sources of ANC for the last pregnancy (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Nurse/ANM	39.2	51.7	24.9	41.7	54.4	60.3
MCHW	12.4	31.0	45.1	56.0	14.3	34.0
Doctor	27.9	25.9	14.4	18.3	13.3	22.3
HA/AHW	24.7	23.9	15.6	30.8	15.6	33.6
FCHV	8.1	12.1	5.8	59.2	8.3	49.1
VHW	4.3	9.3	8.5	25.7	0.7	13.4
Other§	2.7	1.6	1.2	3.3	2.5	1.7
None	22.3	9.0	19.6	3.0	17.0	7.7
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

§ Other includes: TTBA; TBA; FPAN; CMA; Marie Stopes; nursing home; private clinic; Gaon Ghar clinic; immunization center; a person from medical shop.

RDW were asked about the number of times they received ANC during their last pregnancy. The proportion of RDW who received antenatal check-ups from trained providers increased significantly in all three districts (Table 6.9).

Table 6.9 Percent of RDW by number of times they received pregnancy check ups from the trained providers (such as doctor, staff nurse, ANM, HA/AHW, or MCHW) during their last pregnancy in the baseline and follow up surveys

Number of times receiving ANC during the last pregnancy	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
None	25.8	11.9	23.1	8.6	19.0	12.1
At least one time	74.2	88.1	76.9	91.4	81.0	87.9
At least two times	67.9	81.3	68.3	89.0	74.2	84.6
At least three times	58.9	71.6	53.2	73.7	57.1	74.4
At least four times	44.7	58.1	33.1	57.3	40.4	63.4
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

Table 6.10 provides disaggregated data on receipt of four ANC visits. Levels increased across all strata, though socio-economic differentials were still present at follow-on.

Table 6.10 Percent distribution of RDW who received pregnancy check ups from the trained providers (such as doctor, staff nurse, ANM, HA/AHW or MCHW) at least four times during their last pregnancy by selected background characteristics in the baseline and follow up surveys

Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	*	*	*	*	*	*
15-19	46.7	58.1	38.5	74.6	44.8	74.4
20-24	51.2	62.3	40.3	59.8	48.1	68.0
25-29	45.8	62.4	30.0	60.3	34.3	58.8
30-34	32.3	48.6	24.8	34.4	24.1	55.6
35-49	19.1	26.9	16.0	33.9	24.1	22.2
Literacy	*	*	*	*	*	*
Illiterate	22.3	31.9	25.0	47.1	29.6	54.3
Literate	61.5	76.2	52.6	74.6	53.4	73.1
Ethnicity	*	*	*	*	*	*
Brahmin/Chhetri	70.0	78.4	51.1	75.4	47.7	65.2
Tibeto-Burman	45.0	60.8	31.8	50.0	28.9	80.5
Tharu	25.5	44.7	34.9	66.2	38.0	57.9
Dalit	33.3	57.4	28.1	54.4	33.7	62.6
Muslim	13.8	19.3	21.1	43.3	ϕ	ϕ
Other terai origin	39.0	45.3	26.5	49.5	ϕ	ϕ
Other	40.7	68.3	ϕ	ϕ	ϕ	ϕ
Number of living children	*	*	*	*	*	*
<2 children	61.6	70.6	44.9	71.6	53.6	78.9
2-3 children	39.4	54.9	32.0	57.1	38.6	59.9
4 children or more	11.9	24.3	22.5	35.8	26.0	46.3
SES Index	*	*	*	*	*	*
Lowest	20.8	32.7	22.4	43.7	27.0	50.0
Second	32.0	37.1	22.6	51.6	38.2	56.3
Middle	47.3	59.1	39.8	56.0	37.4	63.7
Fourth	56.5	65.9	39.3	57.6	47.7	69.4
Highest	71.4	90.6	47.0	72.1	50.5	75.0
Total (%)	**44.7†**	**58.1†**	**33.1†**	**57.3†**	**40.4†**	**63.4†**
(n)	**900**	**900**	**840**	**840**	**900**	**900**

**Significant at <.05 level ns= Not significant*

ϕ indicates that a figure is based on fewer than 25 cases and are not shown

†Pre-post (Jhapa p= 0.006; Banke p=0.000; and Kanchanpur p=0.000)

Those RDW who reported receiving antenatal services during their last pregnancy were also asked about when they had their first antenatal checkup. There was a marked shift to earlier ANC visits, particularly in Jhapa and Banke (Table 6.11).

Table 6.11 Percent distribution of RDW by timing of receiving first antenatal services during their last pregnancy in the baseline and follow up surveys

Number of months pregnant while receiving first antenatal care for the last pregnancy	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Never	22.3	9.0	19.6	3.0	17.0	7.7
1	-	8.4	-	1.4	-	-
2	15.3	14.6	6.1	4.8	6.0	7.4
3	21.7	26.1	12.3	27.5	14.6	16.4
4	16.8	20.8	16.1	34.0	18.7	33.4
5	11.9	10.9	24.8	19.2	23.3	19.4
6 +	11.9	9.9	20.5	10.0	20.4	15.2
Do not know	0.1	0.3	0.7	0.1	-	0.3
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

RDW were also asked about the types of services that they received during their antenatal check ups. There were improvements noted across the three districts on all elements. At follow-up the majority of respondents reported that their abdomen was examined (85%-88%), they received iron tablets (82%-93%) and TT vaccines (83%-94%). Over two-thirds reported that they received deworming tablets, and had their weight and blood pressure measured (Table 6.12).

Table 6.12 Percent distribution of RDW by types of ANC received during their last pregnancy in the baseline and follow up surveys

Type of ANC received during last pregnancy (at least once)	Jhapa		Banke		Kanchanpur	
	Base-line (n=900)	Follow up (n=900)	Base-line (n=840)	Follow up (n=840)	Base-line (n=900)	Follow up (n=900)
Was your abdomen examined	73.2	85.0	74.4	88.2	77.9	84.9
Did you receive iron tablets	67.8	81.8	69.8	92.9	74.9	87.1
Did you receive deworming tablets	27.1	71.8	31.7	82.0	51.4	76.3
Did you receive TT vaccination	69.8	82.6	76.3	93.6	76.8	85.3
Was your weight measured	58.6	72.2	59.0	74.8	50.0	65.5
Was your height measured	17.1	18.0	15.8	10.8	15.3	16.3
Was your blood pressure measured	67.0	80.1	66.0	82.4	47.2	71.2
Did you give a urine sample	36.3	43.9	12.6	18.1	19.3	20.0
Did you give a blood sample	33.2	36.6	10.4	13.1	16.1	17.7
Received at least 6 of the above services	***57.8***	***71.7***	***43.7***	***66.1***	***43.4***	***61.1***

Family members accompanying RDW during ANC visit

More than 80% of the RDW who reported having ANC visits during their last pregnancy said that they were accompanied by someone at least once. The percentage of RDW who were accompanied increased markedly from 56% at baseline to 82% at follow-up survey in Banke while no marked change was seen in Jhapa (Table 6.13).

Table 6.13 Percent distribution of RDW by persons accompanied at least once while visiting health facility or health personnel for ANC in the baseline and follow up surveys (among RDW who made at least one ANC visit)

Persons accompanied at least once during ANC visit (Multiple Response)	Jhapa		Banke	
	Baseline (n=699)	Follow up (n=819)	Baseline (n=675)	Follow up (n=815)
Husband	48.5	49.5	22.7	26.9
Friend / neighbor	23.3	27.8	24.7	58.2
Other family member	19.5	20.9	11.1	23.4
Mother-in-law	8.4	8.2	5.5	7.2
Mother	3.7	2.3	2.1	2.9
FCHV	0.4	1.1	1.2	3.9
Father-in-law	0.4	0.7	0.1	0.5
Other (TBA)	0.1	0.2	-	-
Nobody (went alone)	19.3	18.9	43.6	18.3

RDW were further asked about the places or persons that they visited for their most recent antenatal care. There were increases in all three districts, with public sector sources used in most cases. Use of PHC/ORC increased in all three districts (Table 6.14).

Table 6.14 Percent distribution of RDW by places they visited for their most recent antenatal care in the baseline and follow up surveys

Places visited for antenatal care	Jhapa		Banke		Kanchanpur	
	Baseline (n=900)	Follow up (n=900)	Baseline (n=840)	Follow up (n=840)	Baseline (n=900)	Follow up (n=900)
PHCC	18.1	20.6	2.5	5.4	16.6	17.1
Subhealth post	15.6	18.8	26.3	29.8	16.1	17.6
Private clinic/nursing home	16.4	16.7	4.6	4.2	3.0	4.8
Health post	10.8	10.8	16.7	21.7	23.4	22.0
PHC/OR clinic	3.3	10.6	18.6	21.8	5.8	9.8
Hospital	9.4	10.4	8.2	7.6	15.9	14.7
FCHV	0.8	1.1	0.5	3.6	0.3	3.4
Pharmacy	0.6	0.4	0.5	1.5	0.8	1.2
Other§	2.7	1.7	2.4	1.5	1.1	1.7
None	22.3	9.0	19.6	3.0	17.0	7.7

§ Other includes: TBA; FPAN clinic; Marie Stopes Clinic; Immunization Clinic; experienced person; medical shop; MCHW; camp.

Consultation with FCHVs during last pregnancy

The RDW were also asked whether they met their FCHV for advice or services during their last pregnancy. In response, at follow-up most RDW in all three districts (75% in Jhapa, 89% in Banke and 78% in Kanchanpur) reported having met their FCHVs; this was a much higher proportion than at baseline (Table 6.15).

Table 6.15 Percent distribution of RDW meeting the FCHVs during their last pregnancy in the baseline and follow up surveys

Number of times met the FCHV	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
0	76.0	24.8	65.1	10.7	52.3	22.3
1-2	11.9	32.1	17.1	41.2	20.0	31.3
3-4	9.8	29.7	15.6	41.1	21.6	33.9
5 +	2.3	13.3	1.9	6.8	6.0	12.2
Do not know	-	0.1	0.2	0.2	0.1	0.2
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

Table 6.16 presents disaggregated data on use of FCHV-provided antenatal services. By almost all measures, differentials in use of FCHV services differed relatively little at follow-up, suggesting that the program has functioned well in terms of social inclusion.

Table 6.16 Percent distribution of RDW who met FCHV for services or advice during their last pregnancy prior to their most recent delivery by selected background characteristics in the baseline and follow up surveys

Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	ns	*	ns	ns	ns	*
15-19	26.2	68.4	33.1	89.0	43.1	81.4
20-24	24.5	75.8	36.4	86.9	49.5	81.3
25-29	26.7	77.1	35.9	91.5	48.1	73.1
30-34	21.9	82.9	36.3	91.4	50.6	80.0
35-49	10.3	61.5	26.7	91.9	37.0	55.6
Literacy	*	*	ns	*	ns	ns
Illiterate	18.4	70.8	34.6	91.7	47.3	75.8
Literate	28.2	78.2	35.6	85.2	48.0	79.9
Ethnicity	ns	*	ns	*	*	ns
Brahmin/Chhetri	26.0	81.6	28.9	80.1	44.2	76.6
Tibeto-Burman	20.7	61.7	38.6	75.9	37.8	85.4
Tharu	17.4	75.8	31.4	93.8	55.1	79.9
Dalit	27.2	71.4	41.3	88.6	45.2	74.8
Muslim	12.3	56.6	38.7	94.7	ϕ	ϕ
Other terai origin	31.0	87.4	37.8	95.7	ϕ	ϕ
Other	33.9	83.3	ϕ	ϕ	ϕ	ϕ
Number of living children	ns	ns	ns	ns	*	*
<2 children	27.3	74.6	35.0	88.9	45.3	81.0
2-3 children	23.5	77.7	35.1	87.7	51.9	78.6
4 children or more	15.9	68.2	34.4	93.2	41.8	70.1
SES Index	ns	ns	ns	ns	ns	ns
Lowest	23.8	71.6	28.1	86.5	42.3	74.2
Second	21.5	70.9	34.8	90.7	48.5	71.3
Middle	24.8	77.3	44.4	91.6	56.7	83.2
Fourth	24.5	76.9	33.7	89.5	47.1	81.7
Highest	25.6	78.6	34.8	87.7	43.6	77.3
Total (%)	**24.0†**	**75.2†**	**34.9†**	**89.3†**	**47.7†**	**77.7†**
(n)	**900**	**900**	**840**	**840**	**900**	**900**

**Significant at <.05 level ns= Not significant*

ϕ indicates that a figure is based on fewer than 25 cases and are not shown

†Pre-post (Jhapa p= 0.000; Banke p=0.000; and Kanchanpur p=0.000)

The RDW were also asked if, as a part of their antenatal counseling, the FCHVs discussed specific plans for the delivery. The possible responses were read out by the interviewers. About two-thirds (63%-71%) of RDW reported that FCHVs discussed with them identifying or using skilled birth attendant followed by about three-fifths (60%-67%) - financial arrangements for delivery care. Similarly, over half (55%-57%) reported that the FCHVs discussed emergency transport for delivery and sources of emergency obstetric care. Fewer (33%-38%) reported having received counseling on identifying persons to accompany them in emergency (Table 6.17). The percentage of RDW who received counseling markedly increased from baseline, although to a lesser degree in Kanchanpur (where baseline levels were already comparatively high).

Table 6.17 Percent distribution of RDW reporting that FCHVs discussed specific plans for delivery during their last pregnancy in the baseline and follow up surveys

Whether the FCHV discussed specific plans for any of the following during the last pregnancy	Jhapa		Banke		Kanchanpur	
	Base-line (n=900)	Follow up (n=900)	Base-line (n=840)	Follow up (n=840)	Base-line (n=900)	Follow up (n=900)
Identifying/using a skilled birth attendant	15.8	64.1	19.6	70.5	35.3	62.9
Finances for delivery care	10.1	59.7	15.2	66.7	29.9	60.8
About specific source of Emergency Obstetric Care	12.7	56.6	13.2	54.8	27.3	57.2
Emergency transport for delivery	9.8	51.6	13.3	56.7	25.7	43.2
Identify person to accompany mother in emergency	8.8	38.2	10.1	38.2	23.0	33.0

†*Pre-post (Jhapa p= 0.000; Banke p=0.000; and Kanchanpur p=0.000)(in all specific plans)*

All RDW were further asked about types of advice received from FCHVs during their last pregnancy. Twenty-three types of advice were read out by the interviewers. As was the case with birth preparedness topics, reported counseling by FCHVs markedly increased from baseline, although to a lesser degree in Kanchanpur, where baseline levels were already comparatively high (Table 6.18).

Table 6.18 Percent distribution of RDW who received advice from FCHVs on various topics related to pregnancy, delivery and postpartum care during their last pregnancy in the baseline and follow up surveys

Whether received advice from FCHV on any of the following topics during the last pregnancy	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
	(n=900)	(n=900)	(n=840)	(n=840)	(n=900)	(n=900)
Pregnancy-related						
Seek ANC 4 times from health worker	19.4	72.2	24.3	81.3	43.2	71.0
Take rest and avoid heavy work	20.2	72.7	30.2	81.2	44.1	72.9
Proper, balanced diet	19.8	70.3	30.4	74.8	43.9	69.7
Tetanus toxoid vaccination	22.6	74.0	34.0	87.0	46.2	75.8
Obtain iron and deworming tablets	22.7	73.7	31.5	85.5	46.0	76.2
Danger signs for pregnant woman	16.9	64.9	24.2	77.6	40.2	66.4
Delivery-related						
Using a skilled birth attendant	15.6	65.8	20.8	70.6	37.0	63.2
Use Clean Home Delivery Kit	10.3	42.1	16.8	65.2	37.1	51.8
Deliver in clean, light surface/room	10.7	51.9	17.1	49.3	34.9	43.2
Danger signs during delivery	11.0	57.4	18.1	71.2	33.0	57.2
Financial preparation for your delivery	9.1	57.9	13.7	66.0	29.0	57.7
Identifying emergency transport options	7.3	48.7	10.5	51.0	23.3	37.3
Arranging for blood in case of emergency	5.1	36.0	5.0	27.4	15.7	23.2
Post-delivery and newborn care-related						
Make at least 3 PNC visits	8.3	42.4	11.8	39.3	27.2	33.2
Mother should take Vitamin A after delivery	14.0	63.6	21.5	74.8	39.3	69.8
Danger signs for postpartum woman	10.4	51.0	16.2	65.5	31.2	51.3
Wrap the newborn in a clean and dry cloth	8.7	52.8	16.3	62.9	34.3	54.6
Do not bathe the newborn within 24 hours	4.0	52.1	11.3	72.4	29.9	62.2
Keep the newborn's cord dry and clean (do not apply anything)	6.4	52.2	14.6	60.1	29.3	50.6
Breastfeed the newborn within 1 hour after birth	10.3	54.7	16.1	75.1	35.2	63.4
Continue exclusive breastfeeding	9.3	51.1	16.1	64.4	34.6	56.7
Danger signs in newborn	10.0	50.2	16.3	64.6	31.0	55.3
Other						
Use FP following delivery	9.8	47.7	17.5	45.6	32.1	46.6

In the follow up survey, husbands and MIL who reported having met FCHVs during their wife/DIL's last pregnancy were asked if they had received specific information about where their wives/DIL should go for delivery. About nine in every 10 husbands and MIL in Banke and Kanchanpur but less than three quarters in Jhapa reported having received such information. Those who did not were asked about the usefulness of such information (Table 6.19).

Table 6.19 Percent distribution of husbands and MIL who received specific information from FCHVs during their wife's/ DIL's last pregnancy in the follow up survey

Description	Jhapa		Banke		Kanchanpur	
	Husband	MIL	Husband	MIL	Husband	MIL
Whether FCHV gave you specific information about where your wife/DIL should go for delivery						
Yes (%)	74.5	67.8	85.3	92.2	89.2	89.1
Total (n)	**98**	**87**	**129**	**103**	**74**	**55**
If no, opinion regarding the usefulness of receiving more specific information						
Very useful	72.0	71.4	63.2	50.0	75.0	83.3
Somewhat useful	20.0	28.6	26.3	50.0	25.0	16.7
Not useful	8.0	-	10.5	-	-	-
Total (n)	**25**	**28**	**19**	**8**	**8**	**6**
Whether FCHV gave specific information about which health worker to contact to attend a home birth if your wife/DIL chose to deliver at home						
Yes (%)	50.6	66.3	79.8	86.4	83.8	74.5
Total (n)	**87**	**98**	**129**	**103**	**74**	**55**
If no, opinion regarding usefulness of receiving more specific information						
Very useful	74.4	78.8	65.4	100.0	75.0	92.9
Somewhat useful	25.6	18.2	34.6	-	16.7	7.1
Not useful	-	3.0	-	-	8.3	-
Total (n)	**43**	**33**	**26**	**14**	**12**	**14**
Opinion regarding the usefulness of all information given by FCHV						
Very useful	79.3	87.8	87.6	94.2	89.2	90.9
Somewhat useful	19.5	11.2	12.4	5.8	10.8	9.1
Not useful	1.1	1.0	-	-	-	-
Total (n)	**87**	**98**	**129**	**103**	**74**	**55**

Types of counseling received during ANC visit

RDW who had received antenatal care during their last pregnancy were asked about content of the counseling received. Topics were read out. Levels of reported counseling were markedly higher in the follow-up survey (Table 6.20). The great majority (90%-98%) of RDW from all three districts reported having received counseling on TT vaccine, followed by pregnancy-related danger signs (65%-82%) and use of a skilled birth attendant (68%-72%). Over half of the RDW mentioned that they received counseling on financial preparation, breastfeeding immediately after birth, and wrapping the newborn.

Table 6.20 Percent distribution of RDW by type of counseling received from health care providers any time during their last pregnancy

Types of counseling received from health workers during last pregnancy	Jhapa		Banke		Kanchanpur	
	Base-line (n=699)	Follow up (n=819)	Base-line (n=675)	Follow up (n=815)	Base-line (n=747)	Follow up (n=831)
Tetanus toxoid vaccination	80.0	90.0	87.6	98.3	88.2	94.6
Using a skilled birth attendant	37.6	67.5	33.6	71.5	54.5	65.9
Danger signs during pregnancy	43.9	65.2	45.8	81.6	51.0	66.7
Financial preparation for your delivery	23.6	61.3	24.6	62.2	34.3	50.8
Breastfeeding immediately after birth	31.9	58.7	30.7	69.4	47.5	52.7
Wrapping the newborn	28.9	56.9	30.7	61.8	50.3	50.4
Identifying emergency transport options	17.5	45.4	15.7	43.2	28.6	25.8
Family planning	20.3	36.3	21.0	33.0	35.2	31.8
Arranging for blood in case of emergency	15.5	37.0	8.3	27.0	17.8	18.3

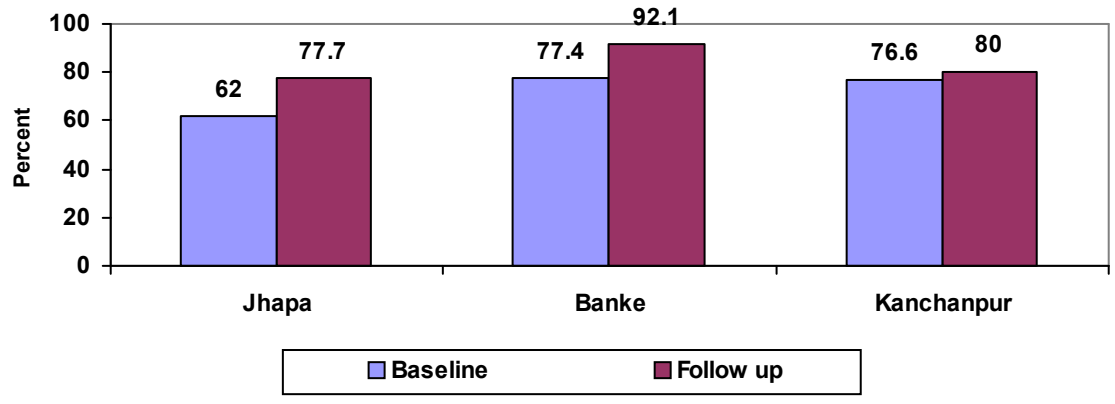
In the follow-up survey, those RDW who reported having received ANC during their last pregnancy were further asked if the FCHVs provided them specific information about where to go for antenatal check ups. About 82% of the RDW in Banke followed by 74% in Kanchanpur and 67% in Jhapa reported receiving such information

Receiving TT vaccines

TT vaccination rates during most recent pregnancy (based on recall)

It is recommended that women receive TT vaccines twice during pregnancy (unless they have already received five doses over their life time). RDW were asked about how many times they received TT during their last pregnancy. At follow-up, more than 92% of the RDW in Banke followed by 80% in Kanchanpur and 78% in Jhapa reported having received at least two doses (Figure 6.1).

Figure 6.1 Percent distribution of RDW who received at least 2 doses of TT vaccines during their last pregnancy in the baseline and follow up surveys



n= 900 each in Jhapa and Kanchanpur and 840 in Banke

Table 6.21 presents data on TT vaccines by background characteristics. In Banke, overall coverage was higher at follow-up and coverage across most disaggregation strata was more similar than among respondents from the other two districts.

Table 6.21 Percent distribution of RDW who received at least two doses of TT during last pregnancy by selected background characteristics in the baseline and follow up surveys (based on recall)

Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	*	*	*	ns	*	*
15-19	69.2	76.9	79.2	91.5	81.0	86.8
20-24	65.7	81.4	83.6	93.6	82.4	86.7
25-29	63.7	80.8	73.7	92.0	76.0	77.6
30-34	54.2	75.2	75.2	90.3	61.4	72.2
35-49	35.3	42.3	62.7	88.7	48.1	31.1
Literacy	*	*	*	ns	*	*
Illiterate	40.4	62.1	72.8	90.9	69.2	72.3
Literate	78.2	88.4	88.3	94.2	85.4	89.1
Ethnicity	*	*	ns	ns	ns	*
Brahmin/Chhetri	78.8	89.4	82.2	94.2	81.4	86.1
Tibeto-Burman	67.1	70.0	70.5	87.0	86.7	92.7
Tharu	44.3	70.8	66.3	91.5	70.2	73.2
Dalit	59.6	81.6	79.3	93.0	74.7	73.4
Muslim	38.5	63.9	78.9	90.7	ϕ	ϕ
Other terai origin	56.0	67.4	84.7	93.5	ϕ	ϕ
Other	57.6	85.0	ϕ	ϕ	ϕ	ϕ
Number of living children	*	*	*	*	*	*
<2 children	73.8	83.0	82.5	93.4	84.1	90.7
2-3 children	61.1	80.2	80.7	94.1	79.4	80.9
4 children or more	30.2	48.6	66.1	85.8	59.7	61.0
SES Index	*	*	*	ns	*	*
Lowest	40.1	56.2	67.6	92.1	60.7	71.7
Second	48.1	66.9	73.2	89.5	72.5	75.6
Middle	67.9	80.8	78.9	91.0	79.5	82.1
Fourth	74.5	84.4	83.4	91.9	83.9	83.9
Highest	83.9	96.4	88.6	95.6	85.1	87.2
Total (%)	**62.0†**	**77.7†**	**77.4†**	**92.1†**	**76.6†**	**80.0†**
(n)	**900**	**900**	**840**	**840**	**900**	**900**

**Significant at <.05 level* *ns= Not significant*

ϕ indicates that a figure is based on fewer than 25 cases and are not shown

†Pre-post (Jhapa p= 0.000; Banke p=0.000; and Kanchanpur p=0.306)

Lifetime TT vaccination rates (based on recall)

RDW were asked about the number of doses of TT they had received during their lifetime. In the follow up survey, about half of those from Jhapa and Banke and a little under half of those from Kanchanpur reported having received five times or more. These levels were very similar to baseline. However, in all three districts the proportion reporting zero life-time doses dropped between baseline and follow-up, although to a more modest degree in Kanchanpur.

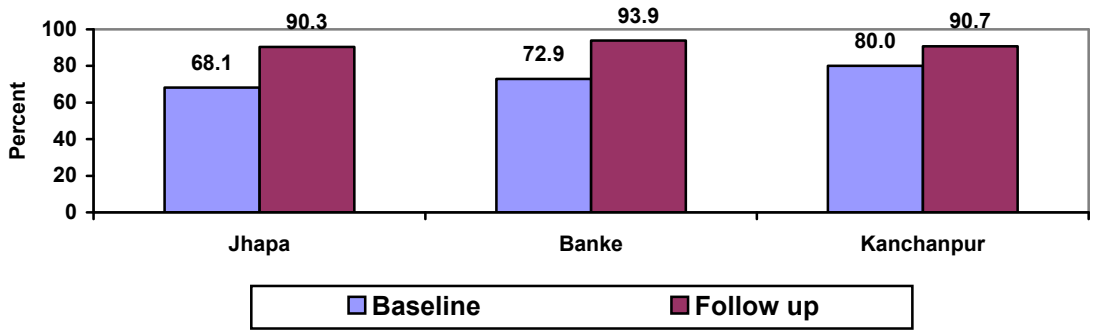
Table 6.22 Percent distribution of RDW by number of times they received TT vaccines during their life time in the baseline and follow up surveys

Total number of injections for TT received in lifetime	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
None	10.8	5.2	6.9	1.7	8.2	5.8
1-2 times	14.8	18.2	17.9	24.0	18.6	24.1
3-4 times	20.8	24.5	21.0	21.9	24.4	26.8
5 times or more	51.8	50.2	49.4	51.2	45.8	40.9
Mean	**4.8**	**4.8**	**5.3**	**4.9**	**4.9**	**4.4**
SD	**3.2**	**2.9**	**3.8**	**2.7**	**3.5**	**2.7**
Do not know	1.9	1.9	4.9	1.2	3.0	2.4
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

Receiving iron/folic acid and deworming tablets

At the time of the follow-up surveys over 90% (90%-94%) of the RDW from all three districts reported having received iron/folic acid tablets during their last pregnancy. These figures are considerably higher than at baseline (Figure 6.2).

Figure 6.2 Percent distribution of RDW who used iron/folic acid tablets during their last pregnancy in the baseline and follow up surveys



n= 900 each in Jhapa and Kanchanpur, and 840 in Banke

Table 6.23 shows use of iron/folic acid tablets by background characteristics. In Banke, at follow-up, as with other service utilization indicators, there was relatively little difference across disaggregation strata, indicating success with regard to social equity. A higher proportion of the women with low parity reported using the iron/folic acid tablets compared to women of high parity. Coverage was better among women from more wealthy households, although only to a negligible degree in Banke.

Table 6.23 Percent distribution of RDW who used iron/folic acid tablets during their last pregnancy by selected background characteristics in the baseline and follow up surveys

Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	*	*	*	ns	*	*
15-19	78.5	89.7	80.0	94.9	82.8	96.1
20-24	71.9	93.2	76.7	94.8	85.0	93.6
25-29	68.3	90.0	69.1	93.8	79.8	90.6
30-34	57.3	93.3	69.9	95.7	67.5	88.9
35-49	45.6	67.3	60.0	85.5	55.6	53.3
Literacy	*	*	*	ns	*	*
Illiterate	46.9	82.0	68.1	93.4	73.1	85.5
Literate	84.0	96.1	84.2	94.9	88.3	96.8
Ethnicity	*	ns	ns	ns	ns	*
Brahmin/Chhetri	88.3	96.1	77.2	95.3	83.6	92.8
Tibeto-Burman	68.6	86.7	84.1	88.9	84.4	97.6
Tharu	53.0	87.0	73.7	93.8	76.1	89.0
Dalit	64.9	93.9	71.9	91.2	78.9	87.1
Muslim	36.9	75.9	65.7	94.3	◆	◆
Other terai origin	54.0	88.4	72.4	95.7	◆	◆
Other	76.3	96.7	◆	◆	◆	◆
Number of living children	*	*	*	*	*	*
<2 children	83.0	94.4	83.3	95.8	87.0	95.7
2-3 children	64.4	90.5	72.2	94.9	81.3	92.8
4 children or more	36.5	74.8	62.8	89.2	67.3	77.4
SES Index	*	*	ns	ns	*	*
Lowest	46.5	79.0	67.1	90.5	66.9	83.3
Second	57.5	86.9	68.9	93.0	77.5	88.1
Middle	70.3	91.4	78.4	92.2	82.5	91.3
Fourth	79.5	93.1	76.7	96.5	83.3	95.7
Highest	90.5	99.5	75.0	96.1	88.8	95.3
Total (%)	**68.1†**	**90.3†**	**72.9†**	**93.9†**	**80.0†**	**90.7†**
(n)	**900**	**900**	**840**	**840**	**900**	**900**

**Significant at <.05 level* *ns= Not significant*

◆ indicates that a figure is based on fewer than 25 cases and are not shown

†Pre-post (Jhapa p= 0.000; Banke p=0.000; and Kanchanpur p=0.000)

Calculated across all respondents (including those who did not take iron/folic acid), while pregnant RDW took iron /folic acid tablets for an average of 107 days in Jhapa, 87 days in Banke and 115 days in Kanchanpur; the corresponding values in the baseline survey was 67 days in Jhapa and Kanchanpur, and 56 days in Banke. Among RDW who had taken iron/folic acid, most (58%-80%) had taken for three months or more. On average, during pregnancy each RDW had received 125 tablets in Jhapa, 98 in Banke and 132 tablets in Kanchanpur. Reported compliance was close to 95%. On average, each RDW reported to have consumed 119 tablets in Jhapa, 92 tablets in Banke and 127 in Kanchanpur (table not shown).

Those respondents who did not consume all the tablets they received during their last pregnancy were further asked about the reasons. The main reasons for not consuming all the tablets were

bad taste or smell (32%-42%), forgot to take (31%-36%) and fear of adverse effects for oneself or to baby (7%-12%) (table not shown).

With regard to the source of supply, among RDW who had taken iron/folic acid tablets, the majority (68%-79%) reported that they obtained them from FCHVs, followed by subhealth post (14%-32%) and health post (14%-24%). The practice of receiving these tablets from FCHVs has increased dramatically from baseline in all three districts as only 30% of the RDW in Jhapa, 17% in Banke and 36% in Kanchanpur had obtained them from FCHVs at baseline (Table 6.24).

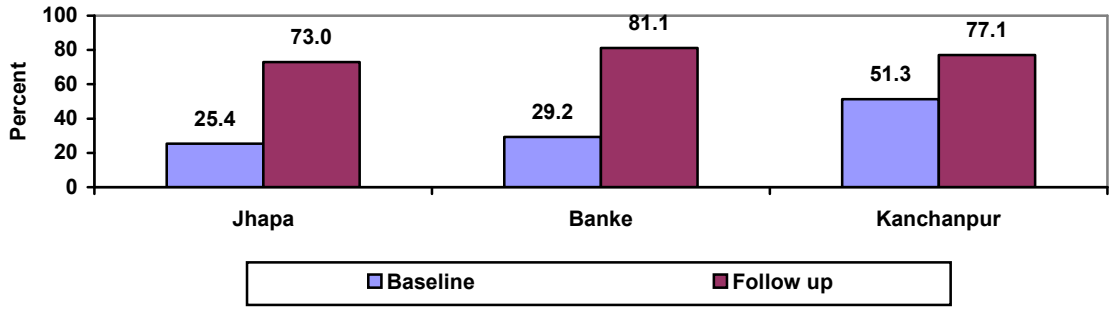
Table 6.24 Percent distribution of RDW by source of supply of iron/folic acid tablets in the baseline and follow up surveys, among RDW who took iron/folic tablets during most recent pregnancy

Sources of supply of the iron/folic acid tablets (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
FCHV	29.9	71.5	17.2	68.3	36.1	78.6
PHCC	23.7	16.4	1.5	5.7	17.5	11.2
Subhealth post	24.1	14.4	35.5	31.9	19.3	16.1
Health post	16.5	14.1	24.3	24.1	31.7	22.7
Private clinic/nursing home	14.5	8.2	2.5	1.6	1.3	1.7
PHC/OR clinic	7.0	6.5	24.5	24.6	11.0	6.3
Hospital	10.6	5.8	6.7	5.1	10.8	5.4
Pharmacy	7.7	3.0	2.5	2.4	2.2	1.1
Other§	2.8	2.0	1.8	0.6	0.4	0.6
Total (n)	**613**	**813**	**612**	**789**	**720**	**816**

§ Other includes: FPAN; Marie Stopes; BASE; immunization center; MCHW; ANM

Figure 6.3 shows data on use of deworming tablets during the last pregnancy. The percentage of RDW who took deworming tablets increased significantly from baseline to follow-up in all three districts.

Figure 6.3 Percent distribution of RDW who used deworming tablets during their last pregnancy in the baseline and follow up surveys



n= 900 each in Jhapa and Kanchanpur, and 840 in Banke

Table 6.25 further shows use of deworming tablets by selected background characteristics. As with other service delivery indicators, socio-economic differentials were present to some degree in Kanchanpur and Jhapa but minimal in Banke. This was true however also at baseline.

Table 6.25 Percent distribution of RDW who used deworming tablets during their last pregnancy by selected background characteristics in the baseline and follow up surveys

Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	*	*	ns	ns	*	*
15-19	23.4	71.8	30.0	83.9	61.2	84.5
20-24	30.0	75.5	29.8	81.9	53.9	81.8
25-29	26.0	76.8	30.0	81.7	51.1	73.5
30-34	17.7	69.5	28.3	80.6	38.6	76.7
35-49	13.2	46.2	24.0	69.4	31.5	35.6
Literacy	*	*	ns	*	*	*
Illiterate	16.6	59.1	28.8	78.1	46.3	69.7
Literate	32.1	82.6	30.0	86.2	57.3	85.9
Ethnicity	ns	*	ns	ns	ns	ns
Brahmin/Chhetri	33.3	83.0	18.9	86.4	56.1	78.6
Tibeto-Burman	25.0	69.2	31.8	70.4	55.6	82.9
Tharu	20.8	71.4	30.9	83.1	46.9	77.6
Dalit	26.3	73.5	36.4	75.4	47.0	70.5
Muslim	9.2	49.4	32.8	78.9	◆	◆
Other terai origin	21.0	61.1	28.6	83.9	◆	◆
Other	25.4	88.3	◆	◆	◆	◆
Number of living children	*	*	ns	ns	*	*
<2 children	31.9	78.2	28.2	82.7	58.0	86.7
2-3 children	24.3	75.4	28.4	82.4	51.9	77.5
4 children or more	10.3	44.9	31.7	75.6	40.8	61.0
SES Index	*	*	ns	ns	*	ns
Lowest	12.9	54.3	24.3	73.0	36.8	68.2
Second	20.4	60.0	29.9	77.9	45.6	71.3
Middle	27.3	79.3	33.3	84.3	56.7	84.2
Fourth	31.5	78.6	31.3	82.0	49.4	83.3
Highest	37.5	89.1	28.0	85.3	67.0	78.5
Total (%)	**25.4†**	**73.0†**	**29.2†**	**81.1†**	**51.3†**	**77.1†**
(n)	**900**	**900**	**840**	**840**	**900**	**900**

**Significant at <.05 level* *ns= Not significant*

◆ indicates that a figure is based on fewer than 25 cases and are not shown

†Pre-post (Jhapa p= 0.000; Banke p=0.000; and Kanchanpur p=0.000)

6.4 Knowledge and attitudes towards delivery services and birth preparedness

In order to assess their level of knowledge, all RDW, as well as their husbands and MIL, were asked about the things or materials that need to be clean for delivery. Concerning thread and perineum, there was no change. For other items, there were improvements in all districts, though the improvements in Jhapa were more modest than in the other two districts (Table 6.26). Overall, at follow-up the proportion of RDW able to correctly name at least three things to be kept clean was 55% in Jhapa (vs. 49% at baseline), 84% in Banke (vs. 69% at baseline) and 83% in Kanchanpur (vs. 62% at baseline).

Table 6.26 Percent distribution of RDW by their opinion regarding the things that need to be kept clean during childbirth in the baseline and follow up surveys

Opinion regarding the things that need to be kept clean during childbirth (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Surface	73.5	80.4	55.6	71.6	54.1	76.3
Mother's clothes	68.8	74.6	59.4	48.3	**7.7**	**2.1**
Blade	53.7	49.4	84.4	81.8	73.8	83.2
Thread	37.6	36.9	72.3	68.5	63.7	68.6
Clean hands	18.0	30.8	24.1	65.6	16.4	47.0
Mother's perineum	28.1	28.8	25.4	32.9	12.3	16.5
Cloth for newborn	12.6	20.5	12.1	4.1	61.9	69.1
Clean nails	6.0	10.7	11.9	36.6	4.4	21.4
Other§	6.5	7.5	5.2	2.4	3.4	4.6
Disc/coin	NAP	2.2	NAP	7.0	NAP	6.1
Do not know	5.4	0.6	1.7	-	6.1	1.2
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

§ Other includes: plastic; plastic sheet; bedding for child; linen or bed sheet; cleanliness of home surroundings; hot water/ mother's body; utensils; bamboo stick; tub; rough with enough light; soap; scissor.

Results for knowledge of husbands and MIL about the things or materials to be kept clean during delivery were similar (table not shown).

Attitudes of family members of RDW towards birth preparedness

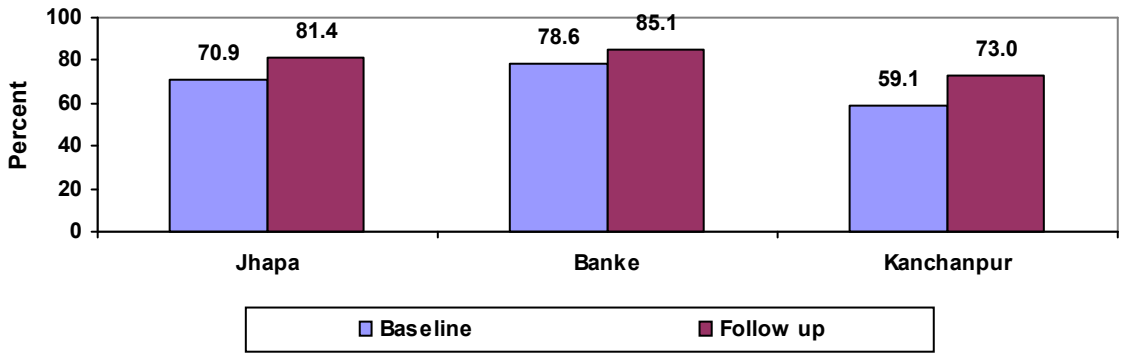
Questions on husbands' and MIL's perceptions with regard to birth preparedness were asked during both baseline and follow-up surveys. Almost all (97%-100%) the husbands and MIL from all three districts agreed that "*it is safer for women to deliver with the assistance of a doctor, nurse or midwife than with a TBA or a relative"* and "*any woman can develop a serious health problem related to pregnancy or childbirth"*. Likewise, over 90% of the husbands and more than 60% of the MIL also positively responded on the statement: "*after a normal delivery, a woman needs a health check up*". Nearly 90% of the husbands in Banke and Kanchanpur and 70% in Jhapa, and about three-quarters of the MIL from all three districts agreed that: "*a woman and her newborn baby could leave the house for medical care before the nwaran"*. Over three-quarters of husbands and MIL disagreed with the statement that "*matters related to childbirth are mostly women's domain; men are not supposed to be very involved"*. About half of the husbands and MIL in all three districts agreed that "*a woman should plan ahead of time where she will deliver her baby and who she will get there"* and "*a woman should plan ahead of time what she will do if she has a serious health problem related to pregnancy or childbirth"*. Overall, attitudes as measured by these questions were already relatively positive at baseline and did not shift significantly in the follow-up survey (table not shown).

6.5 Support from family members during pregnancy

Discussion on planning for the last delivery

Information about care and support received by the RDW from family members during the last pregnancy was also collected. The proportion of RDW reporting discussing plans for the delivery with their husbands increased in all three districts (Figure 6.4).

Figure 6.4 Percent distribution of RDW who discussed with their husbands for planning of their last delivery in the baseline and follow up surveys



n= 900 each in Jhapa and Kanchanpur and 840 in Banke

†*Pre-post (Jhapa p= 0.006; Banke p=0.089; and Kanchanpur p=0.000)*

There were similar increases in husbands and mothers-in-law reporting such discussions, across all three districts (table not shown).

Nutrition in pregnancy

It is important for pregnant women to get adequate quantities of food both for their own nutritional status as well as for the developing fetus. RDW were asked about the amount of food they consumed during their last pregnancy. The proportion reporting eating less than usual, high at baseline, markedly declined by follow-up (Table 6.27).

Table 6.27 Percent distribution of RDW by amount of food they consumed during their last pregnancy in the baseline and follow up surveys

Amount of food consumed during last pregnancy	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Less than usual	35.9	29.0	40.6	14.9	39.2	23.4
Same as usual	25.1	28.6	37.6	33.1	40.3	38.0
More than as usual	38.9	42.3	21.7	52.0	20.4	38.6
Do not know	0.1	0.1	0.1	-	-	-
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

Care and support from family members

In addition to the amount of the food consumed during pregnancy, RDW were also asked about the amount of support they received from family members. Reported support increased between baseline and follow-up, although to a lesser degree in Jhapa where such support was already common at baseline (Table 6.28).

Table 6.28 Percent distribution of RDW receiving care and support from their husbands and family members during last pregnancy in the baseline and follow up surveys

Amount of care and support received from family members during last pregnancy	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Less than usual	2.2	1.2	4.2	0.6	10.8	1.8
Same as usual	34.0	25.0	58.6	34.5	50.1	38.0
More than as usual	63.8	73.8	37.3	64.9	38.9	60.1
Do not know	-	-	-	-	0.2	0.1
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

Those RDW of Jhapa and Banke who reported receiving more support than usual during their last pregnancy were further asked about types of care and support received from family members. For most types of care and support proportions were higher in the follow-up survey (Table 6.29).

Table 6.29 Percent distribution of RDW by type of care and support received from their husbands and family members during last pregnancy in the baseline and follow up surveys

Types of care/support received from your family members (Multiple Response)	Jhapa		Banke	
	Baseline	Follow up	Baseline	Follow up
Advised for more rest	82.4	83.7	67.7	82.0
Given more nutritious food to eat	76.7	82.4	69.6	71.9
Given more food to eat	59.8	81.0	69.3	83.1
Reduced heavy load	82.2	71.8	77.0	77.2
Advised/accompanied for physical check-up	31.4	32.7	28.4	33.6
Other	0.5	-	-	0.2
Total (n)	**574**	**664**	**313**	**545**

RDW who responded that they received more care and support than usual during their last pregnancy were asked "*who provided care and support during their last pregnancy in the family*". Husbands were the principal source reported for social support, followed by mothers-in-law (table not shown).

Decision-making in identifying birth attendant and health facility

The relative roles of different household members in care-seeking decisions were similar across districts and did not significantly change between the two surveys (Table 6.30).

Table 6.30 Percent distribution of RDW reporting the person in the family who decided the person who would attend their or their wife's/DIL's most recent delivery

Main person who decided who would attend your most recent delivery	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Husband	34.1	38.8	40.5	33.8	30.5	25.4
Self	18.8	22.4	15.0	20.1	22.7	26.6
Self and husband together	16.8	13.0	14.8	22.6	4.5	11.1
Mother-in-law	13.7	12.2	20.9	13.8	26.7	26.3
Father-in-law	7.1	6.3	5.7	4.7	8.9	7.1
Mother / father	4.8	4.8	2.3	3.4	1.3	0.4
Other relative	1.9	2.4	0.8	1.6	4.9	3.1
Other (neighbor)	0.1	0.1	-	-	-	-
None	2.6	-	-	-	0.6	-
Do not know	0.1	-	-	-	-	-
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

RDW from Jhapa and Banke were also asked about the main person in their family who decided *where* their delivery would take place; the responses given were similar to those for choice of provider (Table 6.31).

Table 6.31 Percent distribution of RDW reporting the main person in the family who decided where their most recent delivery would take place

Main person who decided where your most recent delivery would take place	Jhapa		Banke	
	Baseline	Follow up	Baseline	Follow up
Husband	37.7	41.4	41.4	32.7
Self	22.8	22.5	17.5	21.8
Mother-in-law	13.2	11.5	20.2	13.7
Self and husband together	13.8	11.5	12.6	22.4
Father-in-law	6.6	6.6	5.6	4.8
Mother / father	4.6	4.5	2.1	3.1
Other relative	1.1	1.9	0.7	1.3
Other	-	-	-	0.1
None	0.1	-	-	-
Total (n)	**889**	**892**	**827**	**831**

Husbands and mothers-in-law were also asked about the person making decisions identifying attendant and place for the delivery. There was no marked difference on the response pattern between the baseline and follow-up surveys (Table 6.32).

Table 6.32 Percent distribution of husbands and MIL reporting the person in the family who decided the person who would attend their or their wife's/DIL's most recent delivery

Description	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Main person who decided who would attend delivery												
Husband	70.5	74.0	27.3	37.8	65.8	67.3	29.9	43.4	56.7	54.8	21.6	28.5
Mother-in-law	12.3	7.8	40.9	37.1	14.7	11.0	47.6	35.7	22.8	17.5	53.4	46.7
Mother / father	2.7	5.7	2.7	1.2	3.6	5.5	1.6	1.2	2.4	3.8	0.3	-
Father-in-law	8.2	5.4	24.2	16.3	7.9	5.5	17.3	8.5	11.1	5.8	19.9	13.7
Wife or DIL herself	4.1	5.1	2.3	2.4	2.2	9.2	1.6	8.9	-	15.1	-	7.9
Other relative	1.4	1.7	1.1	3.2	2.5	1.1	0.4	1.9	6.2	3.1	4.1	2.4
Other (TBA/ FCHV)	-	-	-	-	1.4	0.4	-	-	-	-	-	-
Do not know	0.7	0.3	1.5	2.0	1.8	-	1.6	0.4	0.7	-	0.7	0.7
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**
Main person who decided where delivery would take place												
Husband	72.9	70.9	29.9	38.6	66.9	67.3	32.7	43.8	58.5	57.9	24.7	29.6
Mother-in-law	12.3	8.4	41.3	34.7	15.5	10.3	48.0	34.1	21.5	14.7	50.0	43.6
Wife/DIL herself	4.1	7.1	3.0	5.2	2.2	12.5	2.4	11.6	3.8	16.1	1.7	9.6
Mother / father	1.7	5.7	2.7	1.2	2.9	4.4	1.2	0.8	2.8	3.4	-	-
Father-in-law	8.2	5.4	22.0	15.9	7.9	4.8	14.2	8.9	10.4	6.2	20.3	14.1
Other relative	0.3	2.0	1.1	2.4	2.2	0.7	0.4	0.8	1.7	1.7	2.4	2.4
Other (neighbor/no one)	-	-	-	-	0.7	-	-	-	0.3	-	0.3	-
Do not know	0.3	0.3	-	2.0	1.8	-	1.2	-	1.0	-	0.7	0.7
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**

6.6 Danger signs during delivery

Knowledge about danger sings during delivery

In order to assess their knowledge, all respondents were asked to identify danger signs or symptoms that might appear during labor that indicate a need for immediate care. The percentage of RDW able to mention at least three danger signs increased sharply in all three districts.

Table 6.33 Percent distribution of RDW mentioning the signs/symptoms during labor which need immediate care in the baseline and follow up surveys

Types of the signs/ symptoms during labor (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Labor longer than 8 hours	86.2	78.6	87.9	83.9	81.0	80.5
Excessive bleeding before or after delivery	65.9	73.4	58.2	66.9	58.7	83.2
Appearance of baby's hand first	44.1	54.0	54.2	80.3	-	-
Appearance of baby's leg first	50.3	54.4	61.4	83.9	-	-
Appearance of umbilical cord first	11.1	30.7	25.3	63.3	-	-
Convulsion	9.4	22.4	10.6	15.0	7.7	19.4
Appearance first of any part of the baby that is not the head	-	-	-	-	37.6	75.6
Known at least three of above danger signs	***52.4†***	***70.2†***	***64.0†***	***92.8†***	***16.0†***	***58.9†***
Other§	11.9	16.0	10.4	3.3	10.1	5.6
Do not know	1.5	0.4	1.5	0.5	3.1	1.5
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

§ Other includes: severe lower abdominal pain; excessive vaginal discharge; abnormal position of fetus; swelling in hands and feet; no movement of fetus/fetal death; waist pain; back pain; excessive vomiting; dizziness; urinating problem; severe weakness; retention of placenta; swelling in body; headache; placenta coiled to baby; lose stool; constipation; labor pain for more than 2 hours/ back pain.

†Pre-post (Jhapa p= 0.001; Banke p=0.000; and Kanchanpur p=0.000)

Husbands and MIL were asked the same question. Generally, awareness of danger signs improved, though to a lesser degree than among RDW (Table 6.34).

Table 6.34 Percent distribution of husbands and MIL mentioning the signs/symptoms during labor which need immediate care in the baseline and follow up surveys

Types of the signs/ symptoms (Multiple Response)	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Labor longer than 8 hours	89.0	79.7	85.6	72.9	87.8	78.3	86.6	76.7	77.5	73.6	82.1	77.0
Excessive bleeding before or after delivery	57.9	63.5	60.6	63.3	40.3	66.9	47.2	62.0	38.1	70.2	41.2	77.3
Appearance of baby's leg first	37.7	41.2	50.4	47.8	38.5	74.3	57.9	84.1	-	-	-	-
Appearance of baby's hand first	29.5	39.9	47.3	45.0	32.4	67.3	47.2	77.9	-	-	-	-
Appearance of umbilical cord first	9.9	23.3	11.7	29.5	9.7	40.4	20.9	56.6	-	-	-	-
Convulsion	8.9	15.9	6.4	14.7	9.7	10.7	7.5	11.6	7.6	12.0	4.4	14.1
Appearance first of any part of the baby that is not the head	-	-	-	-	-	-	-	-	27.3	61.3	28.7	61.9
Other§	11.1	16.8	12.5	15.6	8.4	3	8.3	1.2	4.4	4.1	6.3	3.6
Do not know	2.7	2.4	1.9	1.6	3.6	1.1	1.2	0.8	8.3	8.9	7.4	3.8
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**

§ Other includes: severe lower abdominal pain; excessive vaginal discharge; abnormal position of fetus; swelling in hands and feet; no movement of fetus/fetal death; waist pain; back pain; excessive vomiting; dizziness; urinating problem; severe weakness; retention of placenta; swelling in body; headache; placenta coiled to baby; lose stool; constipation; labor pain for more than 2 hours/ back pain.

RDW, husbands and MIL from Jhapa and Banke were asked about the sources from which they had received information about danger signs *during labor* indicating need to seek immediate care.

Table 6.35 Percent distribution of RDW, husbands and MIL by source of information about the signs and symptoms during labor indicating need for seeking immediate care in the follow up survey

Sources of information about the signs/ symptoms during labor indicating need to seek immediate care (Multiple Response)	Jhapa			Banke		
	RDW	Hus-band	MIL	RDW	Hus-band	MIL
BPP Key Chain	67.2	44.3	20.3	74.4	54.8	39.5
Radio Program	65.4	78.4	53.0	59.2	70.2	35.7
From FCHV	64.0	36.1	33.9	82.4	43.8	53.5
From family/neighbors/friends	63.3	60.8	69.7	70.4	71.3	69.8
From health workers	61.3	47.3	23.9	70.2	46.0	33.3
TV Program	55.3	59.5	46.2	19.1	23.9	13.2
Posters	37.1	39.5	9.6	27.4	37.5	7.4
Wall painting	21.3	23.6	5.2	16.6	26.1	5.0
MG meeting	8.7	2.4	5.6	18.9	1.5	9.3
Street theatre	3.5	8.4	2.0	4.6	11.4	3.5
Other (hoarding board/ self study/ TBA/book)	2.7	7.8	2.4	0.4	1.8	4.3
Total (n)	**892**	**296**	**251**	**831**	**272**	**258**

On the question, *did you ever discuss what to do with any of your family members if a problem occurred during delivery?* a higher percentage of husbands compared to RDW themselves and their MIL in all three districts reported having discussed with family members (Table 6.36).

Table 6.36 Percent distribution of RDW, husbands and MIL discussing with any of the family members about type of actions to be taken in case of problems occurred during delivery in the follow-up survey

Persons discussed (Multiple Response)	Jhapa			Banke			Kanchanpur		
	RDW	Husband	MIL	RDW	Husband	MIL	RDW	Husband	MIL
Husband/wife/DIL	61.4	67.9	44.6	70.2	78.3	55.8	57.7	68.8	51.9
MIL	21.0	-	-	24.9	-	-	22.4	-	-
SIL/sister	13.9	5.1	13.5	28.4	2.6	18.2	20.9	6.2	9.3
Friends/neighbor	3.6	3.0	3.2	0.8	0.7	0.8	0.7	1.4	0.3
Other family members	4.0	14.9	16.3	2.3	6.6	5.4	1.0	-	-
FIL	2.0	-	-	1.7	-	-	1.3	-	-
Other§	-	0.3	0.8	-	-	-	0.4	-	-
Father/ (Husband by MIL)	-	16.9	40.6	-	12.9	29.5	-	8.9	24.7
Did not discuss	31.6	22.6	32.3	25.9	19.9	36.8	32.3	29.8	41.2
Total (n)	**892**	**296**	**251**	**831**	**272**	**258**	**891**	**292**	**291**

§ Other includes: FCHV; ANM; health worker..

Perceptions with regard to delivery-related complications:

RDW, husbands and MIL were asked about how dangerous it is if a woman has labor for longer than eight hours, experiences excessive bleeding during or after delivery or if the baby does not come out head first during delivery.

Table 6.37 Percent distribution of RDW, husbands and MIL by their opinion on extent of danger of various signs and symptoms that may appear during delivery in the baseline and follow up surveys

Description	Jhapa						Banke					
	RDW		Husband		MIL		RDW		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Opinion on how dangerous is it when the *labor is longer than 8 hours*												
Not dangerous	2.8	1.0	0.7	-	1.5	0.8	1.0	0.4	1.4	-	1.2	-
Somewhat dangerous	2.5	4.3	1.7	3.7	3.0	8.0	5.6	3.0	4.7	1.5	4.3	1.9
Dangerous	11.0	13.5	9.6	12.8	15.5	17.1	11.9	14.3	10.8	21.3	14.2	27.9
Very dangerous	83.5	80.4	87.3	83.1	79.5	73.7	81.1	82.2	82.4	76.8	80.3	69.8
Do not know	0.2	0.9	0.7	0.3	0.4	0.4	0.5	0.1	0.7	0.4	-	0.4
Total (n)	**889**	**892**	**292**	**296**	**264**	**251**	**827**	**831**	**278**	**272**	**254**	**258**
Opinion on how dangerous is it when the *baby does not come out head-first* during delivery												
Not dangerous	1.3	0.3	0.7	-	1.9	-	0.1	-	0.4	-	0.4	-
Somewhat dangerous	0.8	2.0	1.7	2.4	3.0	0.4	1.9	0.7	0.4	0.4	2.0	1.2
Dangerous	8.3	8.1	8.6	8.1	12.1	9.6	11.0	10.2	11.9	16.5	10.2	19.4
Very dangerous	88.8	88.7	86.0	86.5	82.6	89.2	86.2	89.0	84.9	83.1	87.0	79.4
Do not know	0.8	0.9	3.1	3.0	0.4	0.8	0.7	-	2.5	-	0.4	-
Total (n)	**889**	**892**	**292**	**296**	**264**	**251**	**827**	**831**	**278**	**272**	**254**	**258**
Opinion on how dangerous is it to a women when she experiences *excessive bleeding* during or after delivery												
Not dangerous	0.7	-	-	-	0.8	0.4	0.4	-	-	-	0.4	-
Somewhat dangerous	1.1	1.7	1.0	1.7	1.5	2.0	1.1	0.1	0.7	0.4	1.6	0.8
Dangerous	7.1	7.5	6.5	6.8	9.8	7.2	9.3	9.6	7.6	15.8	11.8	19.0
Very dangerous	90.6	90.1	91.8	91.2	87.9	90.0	89.0	90.3	90.3	83.8	86.2	80.2
Do not know	0.6	0.7	0.7	0.3	-	0.4	0.2	-	1.4	-	-	-
Total (n)	**889**	**892**	**292**	**296**	**264**	**251**	**827**	**831**	**278**	**272**	**254**	**258**

Experiencing danger signs

RDW were asked if they had experienced any of the danger signs listed in Table 6.33 above during their last pregnancy. Each of the possible responses was read out by the interviewer during the interview. Overall the percentage of RDW who reported experiencing at least one of the four danger signs listed in Table 6.38 declined from 33% to 23% in Banke and 31% to 23% in Kanchanpur while no marked difference was observed in Jhapa.

Table 6.38 Percent distribution of RDW experiencing problems during the delivery of their last child in the baseline and follow up surveys

Whether experienced any of the any of the following problems at anytime during last delivery	Jhapa		Banke		Kanchanpur	
	Base-line (n=889)	Follow up (n=892)	Base-line (n=827)	Follow up (n=831)	Base-line (n=896)	Follow up (n=891)
Prolonged labor (>8 hours)	24.6	22.1	18.5	11.2	19.4	18.0
So much bleeding that it wet your clothes and you feared it was life threatening	13.2	16.6	21.3	13.1	15.0	6.5
Convulsions	7.0	5.3	6.0	6.5	11.8	3.6
The baby's hand, leg or cord came out first	1.8	0.7	0.6	1.0	1.9	1.3
At least one of the above	***33.6***	***34.9***	***33.3***	***22.7***	***31.0***	***22.6***

RDW who reported experiencing at least one of the above-mentioned problems during their last delivery were further asked about the places visited or persons consulted for the management of the problems. The percentage of RDW who sought care from a health facility increased in Banke (25% to 31%) and in Kanchanpur (30% to 46%) but remained essentially unchanged, at a higher level, in Jhapa (54% at baseline; 55% at follow-up) (Table 6.39).

Table 6.39 Percent distribution of RDW by places of visit or persons consulted for the management of problems appeared during delivery in the baseline and follow up surveys

Places visited or persons consulted (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Hospital	26.4	25.9	12.0	16.9	13.3	26.9
Private clinic/ nursing home	21.4	20.6	7.3	9.0	4.7	6.5
Consulted relative/neighbor/friend	16.7	18.3	9.8	14.8	11.9	29.9
PHCC /HP/ SHP	8.4	14.5	6.9	7.4	13.7	14.9
Consulted other HW	13.0	9.6	10.2	10.6	8.3	11.9
Consulted FCHV	2.0	7.7	5.8	14.3	7.6	11.4
Consulted dhami / jhankri	3.3	7.7	2.2	3.2	1.4	1.5
Traditional treatment at home	3.0	6.4	8.7	23.3	7.2	6.5
Consulted a TBA	5.0	5.1	10.2	7.9	17.3	21.9
Bought medicine from pharmacy	1.3	3.5	13.5	13.8	2.5	2.5
Given medicine at home	1.3	2.9	0.7	11.6	0.7	1.0
Consulted MCHW	0.3	1.0	5.1	1.6	2.9	3.5
Other§ (14)	2.4	-	2.9	8.0	4.7	3.0
Nothing	16.4	18.0	29.8	16.9	26.3	9.5
% sought care from the health facility	***53.8***	***54.7***	***24.7***	***30.7***	***30.2***	***46.3***
Total (n)	**299**	**311**	**275**	**189**	**278**	**201**

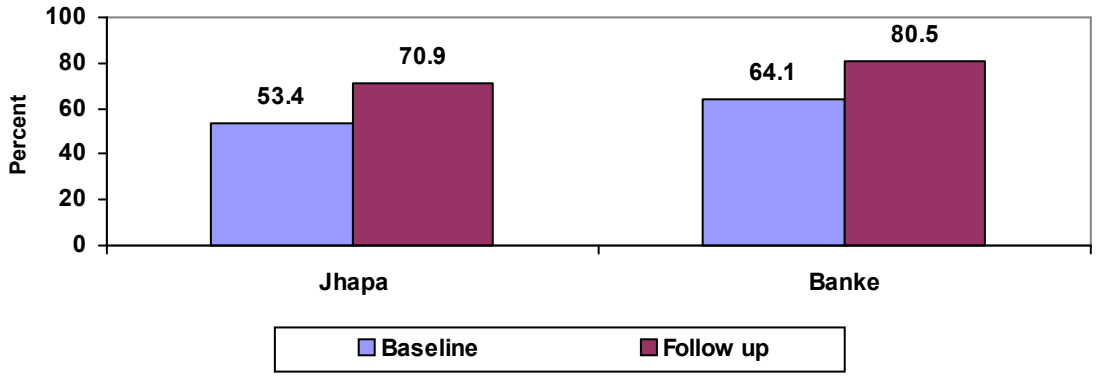
§ Other includes: medical shop person visited home; experienced person; on the way to health facility.

Postpartum hemorrhage

Women whose delivery was attended by a skilled birth attendant (SBA) were often given injection (presumably of oxytocin) immediately after delivery in order to prevent postpartum hemorrhage. Among women who delivered with a SBA but without caesarean section, the proportion of those who were given such injection was much higher at follow up survey compared to baseline survey (Figure 6.5). Although the CB-MNC program focused primarily at

the community level, it also targeted some support to health facilities providing delivery services and one of the areas of technical support was in prevention of post-partum hemorrhage through active management of the third stage of labor.

Figure 6.5 Percent distribution of RDW who were given an injection after the birth of their youngest child in order to prevent them from postpartum hemorrhage among RDW who had live birth, did not have caesarean section and whose birth was attended by a skilled provider (such as doctor, staff nurse or ANM)



n= Jhapa (277 in BS; 350 FS); Banke (103 BS; 190 FS)

Those RDW who had delivered their last baby without caesarean section were asked about the amount of bleeding they have had immediately following the birth of the last child. At follow-up, about seven in 10 RDW in both districts reported having had a normal amount of bleeding vs. with just over six in every 10 at baseline (Table 6.40). Disaggregating by use of misoprostol in Banke, of those *not* using, 33% reported more than normal bleeding, vs. 26% among users. Similarly, 62% of non-users reported needing more than two cloths vs. only 52% among users (table not shown).

Table 6.40 Percent distribution of RDW reporting that they had bleeding immediately following the birth of their last child and number of clothes used to absorb blood during the first 24 hours after delivery in the baseline and follow up surveys

Description	Jhapa		Banke	
	Baseline (n=841)	Follow up (n=826)	Baseline (n=813)	Follow up (n=816)
Amount of bleeding following the birth of the last baby				
More than normal	34.5	29.9	37.0	29.4
Normal	64.6	68.9	62.5	70.2
Do not know	1.0	1.2	0.5	0.4
Number of cloths used to absorb the blood during the first 24 hours after baby was born				
Two pieces or less	24.0	23.4	43.1	43.6
More than two pieces	74.2	76.5	56.3	56.3
Do not know	1.8	0.1	0.6	0.1

Symptoms possibly attributable to Misoprostol

Those RDW whose most recent delivery was a live birth and was not a caesarean section were asked whether they experienced various specific symptoms during the six hours following delivery. The percentage of RDW who experienced such problems was lower in the follow up survey compared with the baseline survey results (Table 6.41).

Table 6.41 Percent distribution of RDW who experienced any of the problems in the first six hours following the delivery of their last child in the baseline and follow up surveys

Types of problems experienced	Jhapa		Banke	
	Baseline (n=841)	Follow up (n=826)	Baseline (n=813)	Follow up (n=816)
Did you feel faint or dizzy?	27.6	23.5	45.8	24.4
Did you actually faint or lose consciousness?	7.1	5.9	9.3	5.5
Did you experience shivering?	20.7	9.7	15.6	16.9
Did you experience nausea?	7.6	4.2	9.0	4.7
Did you experience fever?	8.9	6.4	20.0	9.2
Did you have a watery stool?	5.0	2.4	5.3	1.7
Did you have headache?	NAP	11.0	NAP	6.5

Further disaggregated data of the Banke (where MSC was introduced) shows generally lower levels of these symptoms among *users* – particularly dizziness or faintness (which can be associated with blood loss). One exception was shivering, a known common side-effect of misoprostol. But even in this case there was little difference between users and non-users (see box below).

Types of problems experienced in the first six hours following delivery by the RDW *in Banke* according to the use status of MSC		
Type of problems experienced	Used MSC (n=444)	Non use of MSC (n=372)
Did you feel faint or dizzy?	21.8	27.4
Did you actually faint or lose consciousness?	3.8	7.5
Did you experience shivering?	18.5	15.1
Did you experience nausea?	3.4	6.2
Did you experience fever?	9.0	9.4
Did you have a watery stool?	2.0	1.3
Did you have headache?	6.3	6.7

6.7 Knowledge about sources of delivery services

Respondents' knowledge about the availability of and accessibility to health facilities and trained providers in their areas was also assessed. When asked to mention trained health providers that they knew who would attend a delivery in their homes, over 30% of respondents in Jhapa and 20% in Banke mentioned AHWs or CMAs; and 17% of the RDW in Kanchanpur mentioned ANMs (Table 6.42). Overall, in the follow-up survey, 21% of respondents in Jhapa, 10% in Banke and 19% in Kanchanpur were able to identify a skilled birth attendant (doctor, nurse or ANM) who would attend a home delivery, little changed from baseline.

Table 6.42 Percent distribution of RDW by knowledge about the trained health provider who would attend a delivery in their homes in the baseline and follow up surveys

Know the types of trained health providers in the areas who would attend a delivery	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
AHW/ CMA	26.4	30.6	9.4	20.3	5.4	8.0
ANM	16.4	17.3	3.1	7.3	11.7	17.2
Trained TBA	13.6	14.1	16.9	7.2	21.5	16.3
MCHW	2.8	8.4	24.2	22.6	5.9	13.5
Untrained TBA	8.8	8.3	16.1	6.5	23.7	11.0
FCHV	4.6	7.2	7.7	15.0	17.6	22.0
Doctor	1.6	2.1	0.8	1.1	1.1	0.2
Staff Nurse	2.6	2.0	0.2	1.1	2.8	1.7
VHW	3.5	1.7	1.7	0.4	0.3	-
HA	1.3	0.2	0.1	1.1	0.4	-
Other§	10.1	4.3	10.2	16.8	0.6	1.0
Do not know	8.2	3.7	9.4	0.5	6.1	9.2
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

§ Other includes: medical shop keeper; FPAN clinic; other health workers; neighbor; relatives; peon of PHC.

Results from the same questions, asked of husbands and MIL were similar (table not shown).

RDW were asked if the FCHVs in their areas gave any specific information about which health worker to contact to attend a home birth. Most reported receiving such information from FCHVs. Among those who did not receive, almost all felt that receiving this kind of specific information would have been useful (Table 6.43).

Table 6.43 Percent distribution of RDW who were given specific information by FCHVs about which health workers to contact to attend a home birth if they chose to deliver at home in the follow-up survey

Description	Jhapa	Banke	Kanchanpur
Whether FCHV gave specific information about which health worker to contact to attend a home birth if you chose to deliver at home			
Yes	50.9	66.7	54.3
No	49.1	33.3	45.7
Total (n)	**892**	**831**	**891**
Extent of usefulness to have received more specific information			
Very useful	82.4	80.1	80.6
Somewhat useful	16.9	18.4	17.9
Not useful	0.7	1.4	1.5
Total (n)	**438**	**277**	**407**

Respondents in Jhapa and Banke were asked from which sources they had heard or seen that *delivery should be attended by skilled birth attendant (SBA) or conducted at health facility*. The most commonly reported sources for RDW were FCHV, radio programs and BPP key-chain and,

for husbands - radio, TV programs and friends or neighbors. For MIL the most common sources was family members, friends or neighbors (table not shown).

All RDW, husbands, and MIL were asked to mention the health facility where they (their wives or DIL) could go to deliver. Table 6.44 presents results obtained from RDW. There was little change between pre- and post- surveys. Results from husbands and MIL were similar.

Table 6.44 Percent distribution of RDW by their knowledge about the health facility where they could go to deliver the child in the baseline and follow up surveys

Places or a health facility in the community where you could go to deliver the child	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
PHCC	25.1	26.1	3.3	4.7	25.9	23.5
Hospital	23.2	24.0	33.6	32.4	16.7	17.1
Private clinic/ nursing home	18.2	22.3	11.5	6.7	1.8	5.3
Sub-health post	18.8	16.3	25.2	26.6	18.4	19.3
Health post	12.8	10.3	16.7	20.8	31.9	34.3
PHC/OR clinic	-	0.2	0.8	0.4	0.4	-
Other§	1.9	0.7	9.0	8.4	4.5	0.6
Do not know	-	-	-	-	0.3	-
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

§ Other includes: CMA of medical shop; medical shopkeeper; ANM of medical shop; experienced person; FPAN clinic; MCHW.

Regarding places where they could go for *emergency services* in case of problems during delivery at home, there was little change in responses given between pre and post surveys other than an increase in 'hospital' and decline in 'SHP' as a reported source of such care in Banke (Table 6.45). Results were similar for husbands and MIL (table not shown).

Table 6.45 Percent distribution of RDW by their knowledge about the health facility where they could go to deliver the child in case of problems during delivery at home in the baseline and follow up surveys

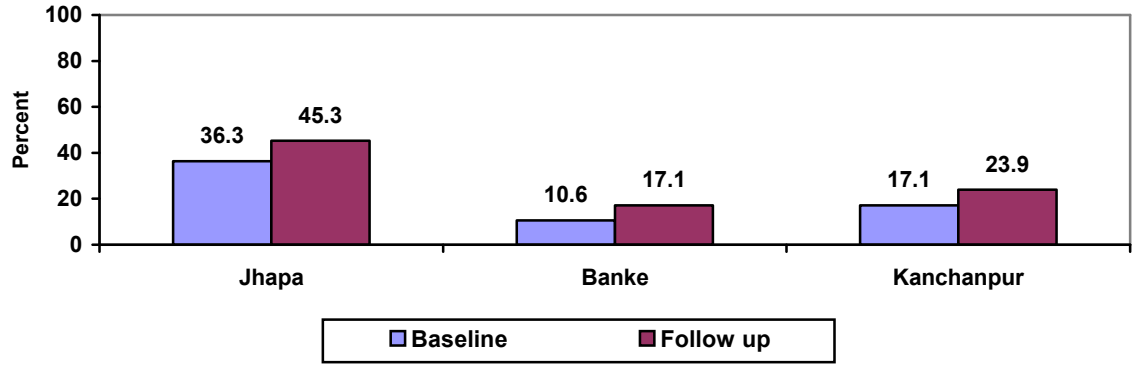
Places or a health facility in the community where you could go to receive emergency services if you have a problem during delivery at home	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Hospital	52.2	50.1	54.9	71.7	43.1	54.5
Private clinic/ nursing home	23.7	18.7	12.9	11.6	4.5	6.4
PHCC	12.3	16.0	1.9	3.4	18.3	17.8
Health post	4.2	7.8	9.7	6.4	18.6	17.9
Sub-health post	6.3	7.0	13.2	3.4	11.7	12.5
PHC/OR clinic	0.1	-	0.4	0.2	0.3	0.2
Other§	1.0	0.3	7.0	3.4	3.2	0.7
Do not know	0.2	-	-	-	0.2	-
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

§ Other includes: CMA of medical shop; medical shopkeeper; ANM of medical shop; experienced person; FPAN clinic; MCHW.

6.8 Utilization of delivery services

Use of skilled birth attendants increased. Overall, at follow-up 45% of the RDW in Jhapa (vs. 36% at baseline), 17% in Banke (vs.11% at baseline) and 24% in Kanchanpur (vs. 17% at baseline) reported delivering their last child with the assistance of skilled providers (doctor, staff nurse or ANM) (Figure 6.6). These increases are similar to data from the government's Health Management Information System for these districts over this period of time (data not shown).

Figure 6.6 Percent distribution of RDW who were assisted by skilled birth attendants during delivery of their youngest child in the baseline and follow up surveys



N= Jhapa (889 BS; 892 FS); Banke (827 BS; 831 FS); Kanchanpur (896 BS; 891 FS)

SBA use by background characteristics is presented in Table 6.46. Younger, more literate RDW were more likely to report such use of services. Not surprisingly, SBA use was highest among RDW in the highest SES quintile. Compared with other measures of service utilization, use of SBA was less equitably distributed, reflecting cost barriers.

Table 6.46 Percent distribution of RDW who were assisted by skilled providers during delivery of their youngest child by selected background characteristics, in the baseline and follow up surveys

Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (years)	ns	*	*	*	ns	*
15-19	37.7	44.4	18.9	22.2	22.4	36.2
20-24	40.4	51.9	12.6	22.5	18.2	26.3
25-29	34.5	46.1	5.2	13.4	15.6	19.0
30-34	28.0	34.3	9.8	5.5	9.6	13.3
35-49	30.9	20.0	5.3	8.2	14.8	15.9
Literacy	*	*	*	*	*	*
Illiterate	18.5	24.2	6.7	7.4	10.1	15.6
Literate	49.5	59.7	19.9	33.6	25.4	33.7
Ethnicity	*	*	*	*	*	*
Brahmin/Chhetri	60.9	68.2	22.3	34.0	27.1	30.2
Tibeto-Burman	42.1	53.4	6.8	11.3	24.4	35.0
Tharu	21.6	35.6	8.6	14.1	5.9	15.5
Dalit	20.5	32.0	6.7	18.4	12.1	18.1
Muslim	7.9	10.8	6.1	6.6	ϕ	ϕ
Other terai origin	19.8	24.2	6.3	9.7	ϕ	ϕ
Other	33.9	50.8	ϕ	ϕ	ϕ	ϕ
Number of living children	*	*	*	*	*	*
<2 children	55.8	65.2	22.0	27.9	31.0	38.2
2-3 children	26.3	34.7	7.8	14.5	10.8	19.0
4 children or more	12.1	12.3	3.7	5.1	11.2	14.1
SES Index	*	*	*	*	*	*
Lowest	11.7	18.6	5.8	8.1	10.4	16.5
Second	20.0	23.6	4.9	10.0	8.3	15.6
Middle	30.2	41.3	9.0	15.8	14.2	18.7
Fourth	52.2	60.6	13.1	15.2	22.1	26.9
Highest	71.4	77.8	24.6	31.2	30.3	42.6
Total (%)	**36.3†**	**45.3†**	**10.6†**	**17.1†**	**17.1†**	**23.9†**
(n)	**889**	**892**	**827**	**831**	**896**	**891**

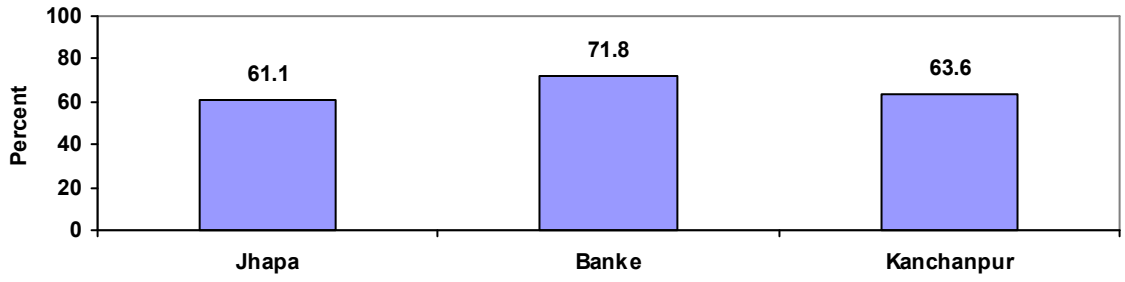
**Significant at <.05 level* *ns= Not significant*

ϕ indicates that a figure is based on fewer than 25 cases and are not shown

†Pre-post (Jhapa p= 0.113; Banke p=0.024; and Kanchanpur p=0.050)

At follow-up, RDW (not including those delivering still-births) were asked if they were given specific information by FCHVs about where to go for delivery. About 2/3 reported receiving such information (Figure 6.7).

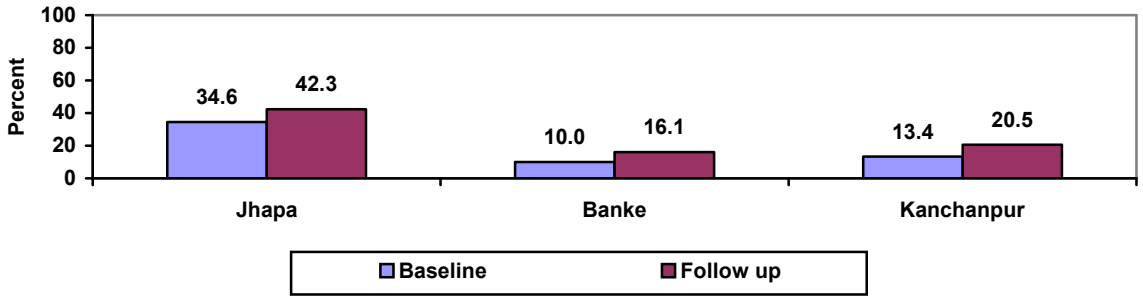
Figure 6.7 Percent distribution of RDW who were given specific information by the FCHVs about where to go for delivery in the *follow-up* survey



n= 892 Jhapa, 831 Banke and 891 Kanchanpur

The practice of delivering at a health facility increased significantly in all three districts. In Jhapa about 40% of institutional deliveries took place in private-sector facilities (private clinics or nursing homes). In the other two districts the private sector contribution was less significant (table not shown).

Figure 6.8 Percent distribution of RDW whose last birth took place at a health facility



n= Jhapa (889 BS; 892 FS); Banke (827 BS; 831 FS); Kanchanpur (896 BS; 891 FS)

Table 6.47 further shows health facility delivery by background characteristics. The picture is essentially the same as for delivery with a skilled birth attendant, showing larger socio-economic differences than with other indictors.

Table 6.47 Percent distribution of RDW whose last birth took place at a health facility by their selected background characteristics in the baseline and follow up surveys

Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	*	*	*	*	ns	*
15-19	37.7	44.4	17.3	17.9	17.2	33.9
20-24	39.6	47.9	11.9	22.2	15.5	24.2
25-29	32.6	42.0	6.6	12.9	10.8	13.2
30-34	23.7	33.3	8.9	4.4	7.2	10.0
35-49	26.5	18.0	1.3	8.2	9.3	11.4
Literacy	*	*	*	*	*	*
Illiterate	17.7	21.2	6.2	7.4	8.4	13.5
Literate	47.2	56.7	19.1	30.9	19.3	28.9
Ethnicity	*	*	*	*	*	ns
Brahmin/Chhetri	57.9	64.6	20.7	33.5	19.8	25.7
Tibeto-Burman	40.0	47.5	4.5	9.4	15.6	17.5
Tharu	21.6	30.6	9.2	14.8	6.9	16.5
Dalit	19.6	33.0	5.9	14.9	10.9	16.7
Muslim	7.9	12.0	5.6	6.1	ϕ	ϕ
Other terai origin	16.7	21.1	6.3	8.6	ϕ	ϕ
Other	33.9	49.2	ϕ	ϕ	ϕ	ϕ
Number of living children	*	*	*	*	*	*
<2 children	55.5	60.8	22.0	26.1	25.2	36.0
2-3 children	23.3	32.4	7.3	13.9	8.9	15.4
4 children or more	10.5	11.3	2.3	4.6	6.6	9.6
SES Index	*	*	*	*	*	*
Lowest	11.7	18.0	7.2	8.9	9.8	11.3
Second	20.0	20.8	4.3	9.4	7.8	18.8
Middle	29.0	40.4	7.2	15.2	11.2	18.1
Fourth	48.9	56.5	11.9	14.0	17.4	24.7
Highest	67.3	72.5	23.1	28.7	20.7	30.8
Total (%)	**34.6†**	**42.3†**	**10.0†**	**16.1†**	**13.4†**	**20.5†**
(n)	**889**	**892**	**827**	**831**	**896**	**891**

**Significant at <.05 level ns= Not significant*

ϕ indicates that a figure is based on fewer than 25 cases and are not shown

†Pre-post (Jhapa p= 0.174; Banke p=0.032; and Kanchanpur p=0.021)

RDW whose delivery took place in a health facility were further asked *whether their last delivery at the health facility was planned or due to problems occurring during labor or delivery that would otherwise have happened at home.* The proportion of RDW delivering at a health facility, based on prior plan was significantly higher at follow-up (Table 6.48).

Table 6.48 Percent distribution of RDW whose last delivery taken place at the health facility was as per pre-plan or only due to the problems during pregnancy or labor in the baseline and follow up surveys

Whether last delivery taken place at the HF was as per plan or only due to emergent problems	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Planned to go during pregnancy	39.9	53.1	44.6	62.7	54.2	65.6
Started to deliver at home	60.1	46.9	55.4	37.3	45.8	34.4
Total (n)	**308**	**377**	**83**	**134**	**120**	**183**

Respondents (RDW, husbands, and MIL) who reported that the delivery did not take place in a health facility were asked about the reasons. By far the most common was the perception that it was not necessary. The reasons given by husbands and MIL were more or less similar to those given by RDW (Table 6.49).

Table 6.49 Percent distribution of RDW by reasons for not delivering their last child or grandchild at the health facility in the baseline and follow up surveys

Reasons for not delivering the last child in a health facility (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Cost too much	13.1	27.2	8.1	28.7	7.7	9.3
Facility not open	2.2	7.8	1.7	4.9	1.9	10.7
Not customary	6.0	5.6	7.7	11.9	10.3	10.0
Too far / no transportation	3.6	4.5	4.4	12.6	6.1	12.0
Called health worker at home	7.2	3.3	1.5	3.4	3.5	6.6
Husband / family did not allow	1.7	3.1	1.1	2.3	1.3	1.6
Do not trust facility / poor quality service	1.0	1.2	0.3	-	0.6	1.0
No female provider at facility	-	0.4	0.1	0.4	0.3	0.4
Other §	4.6	3.9	1.8	2.3	2.6	3.7
Not necessary	81.2	84.7	88.6	81.9	81.7	78.5
Total	**581**	**515**	**744**	**697**	**776**	**708**

§ Other includes: could not go since it was night time; transport strike; child got birth on the way to health facility; delivery took place suddenly; ANM assured that the child in womb is in good condition; delivery took place before due date; it is shameful; did not like to go; delivery took place at medical shop.

Table 6.50 shows the distribution of RDW who considered it important to have a delivery with a trained health worker (such as doctor, nurse, midwife or MCHW) and their actual utilization of delivery services. Of those who stated that it was important for their delivery to be attended by a trained health worker, at follow-up 47% in Jhapa, 30% in Kanchanpur and 25% in Banke had actually received such services during delivery, an increase from baseline in each of the three districts.

Table 6.50 Percent distribution of RDW who considered it to be important for the delivery to be attended by trained health personnel and actual use status of these services during the recent delivery in the baseline and follow up surveys

Attendance of trained health worker during delivery	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Attended by a trained HW	37.5	47.0	14.9	24.8	20.5	29.7
Total (n)	**867**	**886**	**787**	**825**	**831**	**876**

Those RDW who stated that it was "very important" or "somewhat important" for the delivery to be attended by trained health workers but who did not make use of such services were asked the reasons for not doing so. More than three-quarters (almost the same at baseline and follow-up) said it had not been necessary because no serious problems were experienced (Table 6.51). A small proportion gave reasons related to cost and accessibility. Husbands and MIL gave similar responses (table not shown).

Table 6.51 Percent distribution of RDW by reasons for not seeking assistance from trained health workers during last delivery in the baseline and follow up surveys

Reasons for not using any trained health workers to attend delivery despite stating the importance of attending by health workers	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
I did not have a problem and therefore it was not necessary	74.5	74.0	83.3	81.0	80.8	78.7
Another type of health worker attended	10.9	9.1	5.4	9.0	3.9	7.5
Will cost too much	6.8	8.1	4.8	5.8	5.1	2.9
Family members do not allow	0.7	1.9	0.9	1.1	1.7	0.8
Do not know who to ask	0.4	1.7	0.6	0.2	1.2	0.5
Not a customary practice in the community	0.4	1.1	0.3	0.3	1.5	2.8
No service available nearby	2.6	0.6	1.9	1.3	2.3	5.0
Other§	3.5	3.0	2.8	0.7	3.6	1.8
Do not know	0.2	0.4	-	0.6	-	-
Total (n)	**542**	**470**	**670**	**620**	**661**	**616**

§ Other includes: ANM visited my home; experienced person assisted during delivery; could not call upon since it was night time; transport strike; delivery took place on the way to health facility; unavailability of vehicle; health institution was closed; not a practice; first delivery was normal; delivery took place before due date; religious taboos, shameful.

6.9 Behavior change communication

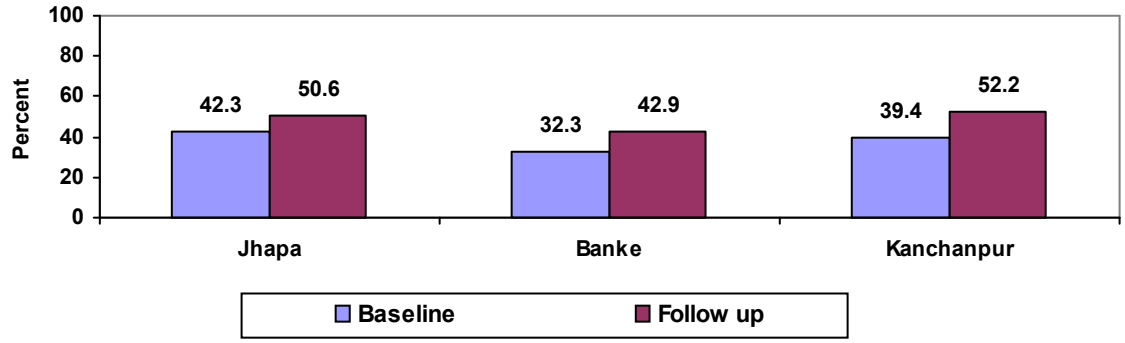
Pregnant women in Nepal participate in decision making regarding who will attend their delivery through a complex, multi-faceted process that is influenced by a variety of factors. Although there are environmental factors related to the decision regarding who will attend a birth such as resources or access, there are other factors centered on the individual such as social support or perception of risk. The CB-MNC baseline and follow-up surveys contained questions that attempted to explore factors potentially related to the use of trained birth attendant including – exposure to messages, knowledge, attitude, social support, self-efficacy, intent to act, behavior, and advocacy. Most of the questions were structured using a Likert scale for the responses. Questions were worded both negatively as well as positively in order to guard against positive response bias.

The principal limitations of this investigation should be briefly noted. Each factor has been measured through a single question; while this approach may produce a reasonably accurate result for an indicator of utilization, it may not be as accurate a measure of a concept such as self-efficacy. As noted above, many of the questions were based on a Likert scale, a construct that may have been difficult for rural Nepalese respondents to understand.

Exposure

In order to assess exposure to BCC materials related to delivery services, all RDW were asked if they had seen, heard or read anything about the need of attendance by a trained health worker on the radio or TV or in the newspaper or any other means in the past three months. A higher percentage of the RDW in the follow-up survey reported such exposure (Figure 6.9). The proportion of RDW reporting such exposure increased vs. baseline in Jhapa (51% vs. 42%); in Banke (43% vs. 32%) and in Kanchanpur (52% vs 39%). Results for husbands showed similar increases. A similar change was not seen for MIL (other than a small increase in Banke).

Figure 6.9 Percent distribution of RDW who had seen, heard or read anything about the need of attendance of a trained health worker during delivery on the radio or TV or in the newspaper or anywhere else in the past three months



n= 900 each in Jhapa and Kanchanpur and 840 in Banke

Source of exposure

RDW reporting having seen, heard or read over the past three months about the need for a skilled birth attendant were asked about the places or persons from whom they got such information. The most frequently cited sources in the follow up survey were radio (83%-88%), FCHVs (62%-81%), TV (36%-71%) and health workers (58%-66%) (Table 6.52).

Table 6.52 Percent distribution of RDW reporting sources from where they got information or messages on attendance of a trained health workers during delivery in the baseline and follow up surveys

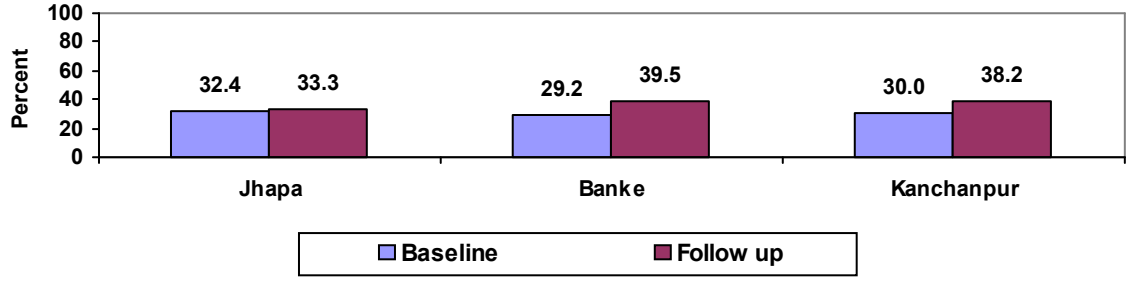
Sources of information or message	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Radio	81.4	83.0	83.0	88.1	80.0	83.0
TV	72.2	70.7	39.9	35.5	50.1	56.6
BPP Key Chain	NAP	63.5	NAP	72.7	-	-
From a health worker at the health facility	47.8	62.2	55.3	65.8	52.7	58.1
From FCHV	31.8	61.8	56.1	80.9	67.9	73.6
Posters, pamphlets, leaflets	20.0	36.0	25.8	44.7	33.8	37.7
Wall painting	NAP	25.8	NAP	26.9	-	-
FCHV flip chart	7.6	24.4	24.4	46.2	38.0	33.8
Newspaper	23.9	18.3	14.4	11.9	17.5	18.1
Community groups	24.7	16.1	24.4	13.6	34.6	32.6
From TBA	17.6	12.6	24.4	12.8	35.5	16.2
Villagers/ friends/ family members/ neighbors	7.6	12.5	5.2	6.7	-	-
Street Theatre	NAP	7.2	NAP	12.8	-	-
Other (training/study/ drama)	-	1.8	1.1	1.7	**7.3**	**5.7**
Total (n)	**381**	**455**	**271**	**360**	**355**	**470**

Husbands and MIL were asked the same question. As in the case for RDW, the most common sources were radio (72%-93%), TV (36%-75%), FCHV (34%-63%) and health workers (33%-56%). A higher percentage of the respondents in Banke (69% husbands and 48% MIL) than those in Jhapa (47% husbands and 30% MIL) reported having obtained information from the BPP key chain. Over one-third of husbands and one-tenth of MIL also reported getting information about it from wall paintings. More than half of husbands compared to less than one-fifth of MIL reported getting messages from print materials such as posters, pamphlets and leaflets (table not shown).

Interpersonal exposure

RDW were asked if any of their friends, family members or other acquaintances had spoken with them during the past two months about attendance of a trained health worker at delivery. Levels increased in Banke and Kanchanpur (Figure 6.10). Three-fifths (60%) of RDW in Kanchanpur and over half in other two districts (56% in Jhapa and 52% Banke) reported either media (electronic or print media) or interpersonal (family members, friends, neighbors, etc) exposure within the past three months to messages on the need for a skilled birth attendant. This was an increase from baseline in all three districts (48%, 49% and 41% respectively).

Figure 6.10 Percent distribution of RDW whose friends, family members or other acquaintances spoken with them in the past two months about attendance of a trained health worker during delivery in the baseline and follow up surveys



n= 900 each in Jhapa and Kanchanpur and 840 in Banke

Husbands and MIL were also asked if they had conversations about skilled birth attendance with friends, families, neighbors or other acquaintances over the past two months. Among husbands, reports of such conversations increased from baseline (though only slightly in Jhapa); among MIL there was no evident trend (Table 6.53).

Table 6.53 Percent distribution of husband and MIL whose friends, family members or other acquaintances spoken with them in the past two months about attendance of a trained health worker during delivery in the baseline and follow up surveys

Whether any friends, family members or other acquaintances spoken about attendance of a trained HW	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
% spoken	28.1	32.4	32.6	24.3	25.5	35.3	18.9	25.6	29.4	37.7	27.4	21.3
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**

Attitude

Almost all (>98%) RDW in the follow up survey felt that it was very important that deliveries be attended by a trained health worker (Table 6.54). When asked why they considered it to be "important" or "very important", safety of mother (72%-85%) and child (66%-74%) were the main reasons given.

Table 6.54 Percent distribution of RDW by their opinion regarding the need of attending delivery by trained health workers and the reasons for it in the baseline and follow up surveys

Description	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Opinion on the importance of attending own delivery by doctor, nurses, midwives or MCHWs						
Very important	86.3	91.8	85.9	92.9	76.0	90.5
Somewhat important	11.2	7.5	9.3	6.4	16.7	7.9
Not important	1.5	0.7	3.7	-	6.6	0.1
Do not know	1.0	-	1.1	0.7	0.7	1.6
Total (n)	**889+**	**892**	**827**	**831**	**896**	**891**
Reasons for being importance -- among those who feel it is very or somewhat important (Multiple Response)						
For the safety of mother	68.4	72.3	55.0	84.8	59.8	71.5
For the safety of child	63.0	65.7	54.1	74.1	57.8	68.3
To examine the condition of mother and child	27.9	42.3	49.8	67.5	24.5	49.4
To manage complications easily	30.3	36.2	36.2	37.9	32.3	32.9
In case of serious problem with the delivery	29.4	32.5	43.5	30.5	23.1	36.2
To confirm the position of the fetus	13.7	25.6	20.5	36.2	12.8	32.8
In order to have a normal delivery	27.7	24.6	33.9	29.1	26.6	42.1
To identify danger signs	11.1	12.8	8.9	16.4	3.6	15.2
For infection free delivery	13.0	8.6	9.3	31.6	7.0	11.9
Other§	0.3	0.1	0.1	-	-	-
Do not know	0.7	0.2	0.6	-	0.5	0.2
Total (n)	**867**	**886**	**787**	**825**	**831**	**876**

+ This question was asked only those RDW who had given live birth in the past 12 months.
§ Other includes: medicines available for both the mother and newborn/ give immunization.

Husbands and MIL were asked the same question and gave similar responses (Table 6.55).

Table 6.55 Percent distribution of husbands and MIL by their opinion regarding the need of attending delivery by trained health workers and the reasons for it in the baseline and follow up surveys

Description	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Opinion on the importance of attending delivery by doctor, nurses, midwives or MCHWs												
Very important	93.8	95.3	87.1	86.1	94.2	93.8	79.9	89.9	84.1	90.1	64.5	82.1
Somewhat important	5.8	4.7	10.6	13.1	5.0	6.3	13.8	9.7	11.4	8.9	22.3	13.1
Not important	-	-	1.5	0.4	-	-	2.4	-	3.5	-	9.5	0.3
Do not know	0.3	-	0.8	0.4	0.7	-	3.9	0.4	1.0	1.0	3.7	4.5
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**
Reasons for being importance -- among those who feel it is very or somewhat important (Multiple Response)												
For the safety of mother	67.7	73.0	69.0	70.7	56.5	78.7	47.9	77.8	63.0	68.2	52.1	69.0
For the safety of child	59.1	68.2	62.8	61.8	57.6	72.4	43.7	69.3	59.8	65.1	49.4	62.8
To examine the condition of mother and child	29.2	39.5	26.0	32.1	47.1	59.9	43.3	52.9	24.3	51.9	16.7	43.7
To manage complications easily	33.7	38.9	29.1	27.7	31.9	30.1	33.6	37.0	30.4	27.3	31.5	20.2
In case of serious problem with the delivery	25.1	27.0	27.1	24.9	42.4	31.3	35.3	29.6	18.5	30.8	22.2	31.4
In order to have a normal delivery	23.0	24.3	26.0	20.5	29.3	31.6	30.3	31.5	27.9	38.8	27.2	36.1
To confirm the position of the fetus	9.6	23.3	15.1	21.3	13.4	29.4	19.7	31.5	9.4	23.5	10.1	21.3
To identify danger signs	11.0	15.5	10.9	11.6	9.8	18.4	8.0	10.1	3.3	15.2	1.6	12.3
For infection free delivery	12.0	10.8	13.2	8.0	7.2	28.7	7.6	26.5	5.8	13.5	4.7	9.4
Other§	0.3	0.3	--	0.4	0.7	-	0.4	-	0.4	-	-	-
Do not know	0.3	0.3	1.9	1.2	0.7	-	1.3	-	0.7	0.7	3.9	1.1
Total (n)	**291**	**296**	**258**	**249**	**276**	**272**	**238**	**257**	**276**	**289**	**257**	**277**

§ Other includes: provide medicines; provide injection.

Advocacy

RDW were also asked whether they had ever encouraged their friends or family members to arrange for a trained health worker to be present at their delivery. There was no change between pre and post for Jhapa. But for the other two districts, at follow-up RDW were more likely to report having encouraged friends and family members to use SBA services (Table 6.56).

Table 6.56 Percent distribution of RDW who have ever encouraged to their friends or family members to arrange for a trained health workers for their delivery in the baseline and follow up surveys

Whether encouraged by friend or family member to arrange for a trained HW to be present at delivery	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Encouraged	48.4	46.0	42.3	55.2	47.8	56.8
Discouraged	3.7	-	1.0	0.4	1.8	1.0
Neither encouraged nor discouraged	47.9	54.0	56.8	44.4	50.4	42.2
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

Summary of BCC factors

Table 6.57 presents a summary of results regarding the various BCC factors as they relate to the utilization of a trained health worker at delivery.

Table 6.57 Percentage of respondents whose most recent delivery was live birth with positive factors in relation to utilization of a trained health worker at delivery in the baseline and follow up surveys

Factor	Indicator Definition	Jhapa		Banke		Kanchanpur	
		Base-line (n=889)	Follow up (n=892)	Base-line (n=827)	Follow up (n=831)	Base-line (n=896)	Follow up (n=891)
Exposure: mass-media	Percentage of respondents reporting media exposure to message regarding need for trained health worker at delivery in 2 months prior to survey	42.4	50.6	32.4	42.7	39.4	52.0
Exposure: mass-media or interpersonal	Percentage of respondents reporting media or interpersonal exposure to message on need for SBA in 2 months prior to survey	49.4	55.9	41.1	51.6	48.1	59.6
Knowledge	Percentage of respondents with correct knowledge regarding need for SBA	84.9	87.6	78.6	95.7	72.9	91.9
Attitude (positive)	Percentage of RDW who state that it is important or very important to have their delivery attended by a SBA	97.5	99.3	95.2	99.3	92.7	98.3
Behavior	Percentage of respondents who had a trained health worker present during their last delivery among RDW with live birth	36.3	45.3	10.6	17.1	17.1	23.2
Advocacy	Percentage of respondents who have advocated to others regarding need for a SBA	48.5	46.2	42.2	55.0	47.7	56.5

Note: For the comparison purposes, the denominator used for the calculation of the above indicators are among RDW whose most delivery was live birth.

Chapter 7

Postpartum, Immediate Newborn and Newborn Care

A series of questions related to knowledge, attitude and practice on postpartum services including newborn care were asked to recently delivered women (RDW), their husbands, and mothers-in-law (MIL). Likewise, information on knowledge about postpartum hemorrhage, family support during postpartum period, immediate newborn care and newborn care during first month was also collected from all the three types of respondents. Results for CB-MNC Core Indicators related to these topics are included in the table below.

CB-MNC Core Indicators for postpartum, immediate newborn and newborn care

Indicator	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Exposure to messages						
Percentage of RDW who report exposure to the message that "a mother and newborn should have their health checked by a trained health worker within 3 days after birth among RDW with live birth"	21.9	35.4	19.3	50.2	16.9	26.5
Percentage of RDW who received information about bleeding after childbirth during their last pregnancy	53.9	72.6	63.1	89.2	NA	NA
Percentage of RDW who received information about a drug that can reduce bleeding after childbirth during their last pregnancy	16.0	18.8	22.7	74.9	NA	NA
Knowledge						
Percentage of RDW who know at least **three** maternal danger signs during postnatal period among RDW with live birth	39.6	65.6	58.3	84.2	25.6	64.4
Percentage of RDW who know at least **three** newborn danger signs among RDW with live birth	26.3	51.3	34.9	68.5	16.9	53.9
Percentage of RDW who know that postnatal checkups for mother and newborn should take place within 1 day (24 hours) after birth among RDW with live birth	2.9	4.6	8.1	29.2	1.7	4.9
Percentage of RDW who know that excessive bleeding during or after delivery is dangerous or very dangerous to the woman in labor among RDW with live birth	97.6	97.6	98.3	99.9	NA	NA
Commodities						
Percentage of RDW who received Vitamin A capsule within six weeks of delivery among RDW who delivered 2-11 months prior to the survey	36.3	68.9	31.6	63.9	62.5	77.1
Utilization						
Percentage of RDW who received postpartum care within 3 days of delivery from a trained provider (doctor, nurse, ANM, HA, AHW or MCHW) among RDW who delivered 2-11 months prior to the survey	43.5	54.7	21.7	29.4	19.3	30.6
Percentage of RDW whose infant received newborn care within 1 day after delivery from a trained provider among RDW with live birth whose infant lived at least two months	40.1	47.4	18.7	25.5	15.5	31.3
Essential newborn care						
Percentage of RDW delivering at home whose newborns' cord was cut with a clean / new instrument OR a clean birth kit was used among RDW with live birth	89.5	90.3	95.7	97.3	95.1	94.6
Percentage of RDW who report that their baby was dried before the placenta was delivered among RDW with live birth	50.2	65.6	46.2	84.5	60.6	72.4
Percentage of RDW who report that their baby was wrapped in cloth before the placenta was delivered among RDW with live birth	51.6	65.0	47.9	81.0	64.4	74.6
Percentage of newborns that have nothing applied on cord stump. among RDW with live birth	59.3	57.4	41.0	68.1	66.6	67.6

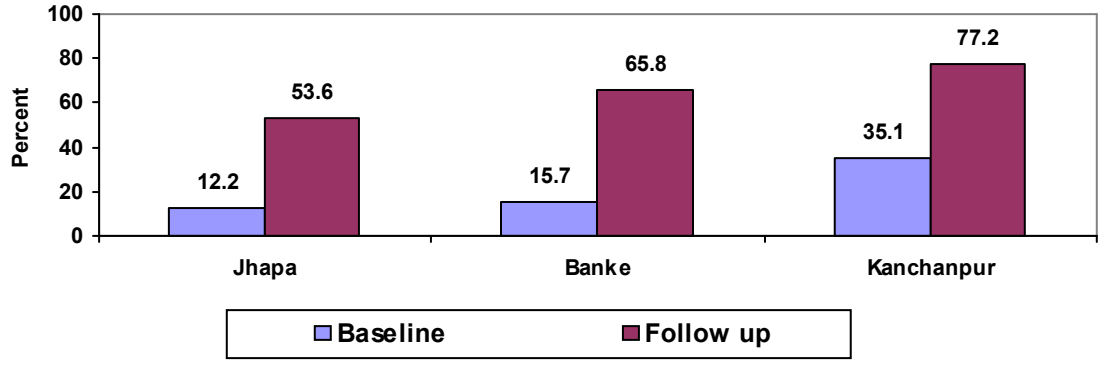
Indicator	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Percentage of RDW who report that their baby was not bathed during first 24 hours after birth among RDW with live birth	17.4	51.0	13.8	64.6	38.4	59.6
Percentage of RDW who breastfed their infant within one hour of birth among RDW with live birth	33.1	41.0	33.9	70.5	67.6	66.0
Percentage of RDW who gave colostrum to their newborn child among RDW with live birth	79.0	90.5	78.5	93.9	89.6	92.9
Percentage of RDW who breastfed their infant exclusively from one to six months (by month of infant's age	54.0	64.3	38.7	56.6	42.3	65.7
Management of health emergencies						
Percentage of RDW who report experiencing a danger sign during the postpartum period following their most recent delivery among RDW with live birth	30.3	27.1	33.1	20.2	28.2	20.0
Percentage of RDW who sought care at health facility after experiencing a danger sign during the postpartum period following their most recent delivery (among RDW with live birth who report experiencing a danger sign)	28.6	38.8	17.2	28.6	28.9	38.2
Percentage of RDW who report that their infant experienced a danger sign during the neonatal period following their most recent delivery among RDW with a live birth whose infant lived at least two months	21.9	25.7	16.2	25.9	21.0	17.5
Percentage of RDW who sought care at health facility for their infant after s/he experienced a danger sign during the neonatal period (among infants who lived at least two months and who experienced a danger sign)	48.4	63.6	52.3	54.0	49.5	50.0

7.1 Postpartum services from health workers or health facility

Meeting with FCHV for postpartum care

RDW who were more than two months post-delivery at the time of the survey were asked about the number of times they met with FCHV to receive services or advice (not including mothers' group meetings) over the six weeks following their recent delivery. There was a significant increase in such contacts since baseline (Figure 7.1). Those who met FCHVs have increased about four fold since baseline in Jhapa and Banke, and more than doubled in Kanchanpur (where such contact was already relatively high at baseline).

Figure 7.1 Percent distribution of RDW who met with FCHV during the six weeks following their recent delivery outside the mothers' group to receive services or advice in the baseline and follow up surveys, among RDW who were more than two months post-delivery



n=Jhapa (765 in BS and 771 in FS); Banke (706 in BS and 722 in FS); and Kanchanpur (815 in BS and 719 in FS)

Among RDW who met their FCHV, most had met her either once or twice (table not shown). Although the proportion of RDW meeting with the FCHV *on the day of bir*th remained unchanged from baseline, overall early postnatal visits increased (Table 7.1).

RDW from Kanchanpur who were more than two months post-delivery and reported having had FCHV home visits were asked about the number of such visits within one month following delivery; on average they reported meeting 1.3 times within the first month (table not shown).

Table 7.1 Percentage of RDW by timing of FCHVs home visit following the delivery of their last child in the baseline and follow up surveys, among RDW who were more than two months post-delivery

Timing of FCHVs home visit following the delivery	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Same day	8.6	8.9	19.5	18.2	8.0	30.3
1-3 days	10.8	18.1	12.4	24.5	19.9	33.7
4-7 days	16.1	23.2	18.6	23.5	14.7	18.6
8-42 days	63.4	49.5	47.8	33.3	54.5	17.5
Do not know	1.1	0.2	1.8	0.4	2.8	-
Total (n)	**93**	**414**	**113**	**477**	**286**	**555**

RDW who had delivered 2-11 months prior to the survey and who reported meeting their FCHVs for services or advice within six weeks of their recent delivery were further asked about types of services or advice received. The possible answers were read out by the interviewers. The majority (75%-91%) of RDW in all three districts reported that they received vitamin A and iron tablets for themselves and advice on immunization for the newborn. More than two-thirds (66%-82%) reported receiving advice on breastfeeding and infant care (Table 7.2).

Table 7.2 Percent distribution of RDW by types of services, help or advice received from FCHV during six weeks following their last delivery, among RDW who were more than two months post-delivery and who reported meeting the FCHVs for services or advice within six weeks following their recent delivery in the baseline and follow up surveys

Types of services, help or advice received from FCHV	Jhapa		Banke		Kanchanpur	
	Base-line (n=93)	Follow up (n=414)	Base-line (n=113)	Follow up (n=477)	Base-line (n=286)	Follow up (n=555)
Diagnose or treat newborn's respiratory infection or diarrhea	41.9	57.0	57.5	60.6	60.1	64.0
Check to see if your newborn had any other health problem	34.4	47.1	47.8	63.3	38.8	76.4
Provide vitamin A for mother	71.0	80.2	69.0	77.4	84.6	84.0
Provide iron tablets for mother	59.1	80.7	48.7	75.1	69.9	82.9
Check to see if the mother had a delivery-related problem (e.g. infection)	24.7	32.4	31.0	52.6	30.4	57.1
Make referral to health service provider	24.7	27.8	21.1	8.0	34.3	9.2
Advice on breastfeeding or infant care	67.7	66.4	69.9	82.0	72.0	78.9
Advice or help with birth registration	39.8	51.2	37.2	73.0	52.4	38.7
Family planning supplies	30.1	32.4	40.7	15.3	48.6	14.6
Advice on immunization to newborn	NAP	84.3	NAP	88.1	NAP	90.5

RDW delivering 2-11 months prior to survey and reporting having met their FCHVs for services or advice within the first six weeks were also asked (with prompting for individual items) about what specific *advice* they received. Over eight in 10 from all three districts reported in the follow up survey to have received advice on taking rest, not doing heavy work, maintaining a balanced diet, and taking iron tablets. Similarly, more than four-fifths in Banke and Kanchanpur and about three-quarters in Jhapa received counseling on breastfeeding. Over three-fifths reported receiving advice on danger signs (Table 7.3).

Table 7.3 Percent distribution of RDW received advice on various aspects related to postpartum services in the six weeks following their last delivery from FCHV, among RDW who were more than two months post-delivery and who reported meeting the FCHVs for services or advice within six weeks following their recent delivery in the baseline and follow up surveys

Advice on the following topics received from the FCHV	Jhapa		Banke		Kanchanpur	
	Baseline (n=93)	Follow up (n=414)	Baseline (n=113)	Follow up (n=477)	Baseline (n=286)	Follow up (n=555)
Take rest	71.0	84.1	85.8	91.0	83.6	88.1
Avoid heavy work	74.2	83.3	85.8	87.8	83.2	84.0
Diet	78.5	79.7	84.1	81.6	85.0	80.9
Breastfeeding counseling	71.0	74.4	79.6	87.4	76.9	81.1
Postpartum danger signs for mother	52.7	66.9	66.4	78.4	68.9	63.1
Danger signs for newborn	60.2	70.5	68.1	80.3	71.7	72.1
Iron tablets	71.0	86.2	67.3	84.3	80.4	89.4
Family planning	52.7	50.7	54.0	49.1	63.6	50.1

Postpartum services from health workers, FCHV or TBA

RDW who were more than two months post-delivery were asked whether a trained health worker or a FCHV checked their health: 1) during the first three days; and 2) between four days and six weeks after the birth. In response, nearly half (45%) of RDW in Kanchanpur followed by 27% in Banke and 11% in Jhapa said that they had received such an assessment within three days of the birth from FCHV (Table 7.4). The percentage of RDW who reported receiving an assessment by a trained health provider (doctor, nurse, ANM, HA, AHW and MCHW) within three days of birth was 55% in Jhapa and 30% in Banke and Kanchanpur. Over two-thirds (69%) of RDW in Kanchanpur followed by 54% in Banke and 24% in Jhapa reported receiving care from a FCHV within six weeks after birth. More than 60% of RDW in Jhapa, 48% in Banke and 44% in Kanchanpur reported having received a check up from a trained health worker (doctor, nurse, ANM, HA, AHW or MCHW) within six weeks of delivery of their last child.

Table 7.4 Percent distribution of RDW who were checked by trained health worker, FCHV or traditional birth attendant on their health during the first three days and four days to six weeks after birth, among RDW who were more than two months post-delivery

Description	Jhapa		Banke		Kanchanpur	
	Base-line (n=765)	Follow up (n=771)	Base-line (n=706)	Follow up (n=722)	Base-line (n=815)	Follow up (n=719)
% of RDW who were checked by a FCHV within 6 weeks after birth						
During the first three days after birth	2.1	11.3	5.4	27.3	5.3	44.6
Between four days and six weeks after birth	0.9	16.3	4.5	41.3	4.4	48.7
Within 6 weeks after birth	2.5	24.0	7.5	54.4	7.9	68.7
% of RDW who were checked by a trained health workers within 6 weeks after birth						
During the first three days after birth	43.5	54.7	21.7	29.4	19.3	30.6
Between four days and six weeks after birth	11.4	20.8	7.6	26.6	14.7	21.7
Within 6 weeks after birth	45.9	60.7	24.5	47.6	28.1	44.1

Table 7.5 further shows data on the cadre of health worker who had checked the RDW during the first three days and four days to six weeks following the delivery of their last child. Respondents were asked to name all personnel who examined them during these time periods. The percentage of RDW who received check-up from doctor, nurse or ANM within three days or four days to six weeks following the birth had increased appreciably from baseline to follow-up survey.

Table 7.5 Percent distribution of RDW by person who checked their health during the first three days and four days to six weeks after birth, among RDW who were more than two months post-delivery in the baseline and follow up surveys

Persons checked on your health (Multiple Response)	Jhapa				Banke				Kanchanpur			
	Baseline		Follow up		Baseline		Follow up		Baseline		Follow up	
	With in 3 days	4 days to 6 weeks	With in 3 days	4 days to 6 weeks	With in 3 days	4 days to 6 weeks	With in 3 days	4 days to 6 weeks	With in 3 days	4 days to 6 weeks	With in 3 days	4 days to 6 weeks
Doctor	26.1	6.3	32.6	8.3	7.4	4.1	11.8	6.6	8.2	3.1	12.8	3.8
Nurse/ANM	31.5	6.7	39.7	9.6	8.9	3.5	14.7	8.2	13.9	8.5	22.4	12.4
HA/AHW	7.7	3.5	10.0	4.9	8.2	1.6	11.6	9.8	2.3	5.2	5.8	5.8
MCHW	0.3	0.4	1.4	4.9	3.5	1.8	4.8	12.2	1.6	1.2	5.6	7.2
VHW	1.2	0.9	0.5	2.2	2.3	0.8	0.1	7.5	-	0.2	0.3	7.6
FCHV	2.1	0.9	11.3	16.3	5.4	4.5	27.3	41.3	5.3	4.4	44.6	48.7
TTBA	2.7	0.3	5.3	2.2	4.0	2.1	3.7	2.4	7.2	1.3	10.3	2.5
TBA	1.3	0.1	2.2	0.9	2.4	0.6	11.2	2.8	9.3	1.0	16.8	1.8
Other§	3.2	0.7	2.2	0.6	6.5	0.8	5.6	0.8	1.3	0.7	1.3	0.7
Do not remember	-	-	-	-	0.1	-	-	0.1	-	-	-	-
None	46.9	86.5	31.8	66.1	60.8	85.3	35.5	42.2	61.3	80.5	22.3	40.6
Total (n)	**765**	**765**	**771**	**771**	**706**	**706**	**722**	**722**	**815**	**815**	**719**	**719**

§ Other includes: Medical shopkeeper; CMA; peon of PHC; other health worker; experienced person.

Table 7.6 shows use of postpartum services from trained health workers (doctor, nurse, ANM, HA, AHW and MCHW) by selected background characteristics. Women with less than two living children, literate, high socio-economic status and who had delivered at health facility were more likely to have received postpartum care than their counterparts. It is worth noting that the percentage of Dalit, Tharu and Muslim women and those belonging to lowest wealth quintile using postpartum services increased significantly.

Table 7.6 Percent distribution of RDW who had received postpartum care within six weeks of delivery from a trained provider by selected background characteristics in the baseline and follow up surveys, among RDW who were more than two months post-delivery

Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	ns	*	ns	ns	*	*
15-19	45.2	66.7	27.8	49.0	41.4	60.2
20-24	50.3	63.0	26.7	50.2	28.8	46.7
25-29	45.0	65.0	27.1	47.7	24.2	37.9
30-34	39.5	48.5	17.7	37.8	17.8	36.3
35-49	34.0	35.7	12.7	46.2	28.6	31.6
Literacy	*	*	*	*	*	*
Illiterate	31.3	41.4	18.3	43.4	20.4	36.7
Literate	56.6	74.4	39.0	55.1	37.2	53.3
Ethnicity	*	*	ns	ns	*	*
Brahmin/Chhetri	67.2	80.2	34.4	58.0	37.0	53.2
Tibeto-Burman	48.2	59.4	26.3	41.7	34.1	58.1
Tharu	31.0	51.4	22.9	39.5	18.1	35.7
Dalit	29.0	53.0	23.0	40.6	23.8	31.8
Muslim	22.9	26.5	17.2	43.7	□	ϕ
Other terai origin	38.6	55.8	21.2	56.8	□	ϕ
Other	47.2	62.0	ϕ	ϕ	□	ϕ
Number of living children	*	*	*	*	*	*
<2 children	63.2	75.7	36.0	55.5	45.2	62.5
2-3 children	36.7	53.6	21.5	41.9	20.2	37.5
4 children or more	23.8	32.2	17.1	46.6	21.2	33.1
SES Index	*	*	*	*	*	*
Lowest	25.9	39.6	16.5	40.7	18.2	33.5
Second	30.9	41.1	17.7	42.0	20.1	35.6
Middle	40.3	57.7	22.1	49.0	26.5	43.0
Fourth	60.8	73.6	30.3	41.7	33.5	48.7
Highest	74.3	87.9	42.0	60.1	41.4	61.4
Place of delivery	*	*	*	*	*	*
At health facility	96.7	98.5	89.9	94.6	87.2	100.0
At home with a SBA	ϕ	93.1	ϕ	ϕ	73.2	95.7
At home without SBA	14.6	28.8	16.6	39.0	14.3	22.2
Total (%)	**45.9†**	**60.7†**	**24.5†**	**47.6†**	**28.1†**	**44.1†**
(n)	**765**	**771**	**706**	**722**	815	**719**

**Significant at <.05 level* *ns= Not significant*

ϕ indicates that a figure is based on fewer than 25 cases and are not shown

†Pre-post (Jhapa p= 0.005; Banke p=0.000 ; and Kanchanpur p=0.001)

Places visited for postpartum services

RDW who were more than two months post-delivery were asked if they visited a health facility or PHC/ORC within six weeks after the birth for a checkup or to have their child vaccinated. At both baseline and follow-up such service use was reported by most RDW across all three districts (table not shown).

The RDW who were more than two months post-delivery at the time of the survey and had visited a health facility for check ups were further asked about the places where they had received service. PHC and EPI outreach clinics, along with SHPs were the most important sources of care. There was relatively little change in where such care was sought, other than some increase in use of PHC ORC in Banke and Kanchanpur (Table 7.7).

Table 7.7 Percent distribution of RDW by type of health facility they visited within six weeks of their most recent delivery for their health check ups or for child immunization in the baseline and follow up surveys, among RDW who were more than two months post-delivery and who visited a health facility for check ups

Types of health facility visited	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Immunization center/ immunization clinic	38.8	39.1	27.3	13.8	45.3	42.6
SHP	25.7	23.3	15.0	19.8	8.5	7.0
Outreach clinic	12.9	12.8	42.0	54.4	8.5	22.9
PHC	10.5	11.8	0.7	1.3	13.9	10.6
HP	5.5	7.5	7.4	6.3	18.0	14.5
Hospital	3.3	2.6	3.4	2.9	2.7	1.5
Private clinic	1.4	2.2	1.8	1.3	1.5	0.9
NGO clinic	1.4	0.7	0.2	0.2	0.1	-
Other§	0.5	-	2.3	-	1.5	-
Total (n)	**637**	**695**	**612**	**630**	**749**	**660**

§ Other includes: FPAN clinic; called doctor at home; medical shopkeeper; CMA; FCHV.

Those RDW who visited a health facility in the first six weeks after their most recent delivery were also prompted about types of services received. In general, post-partum women going to health facilities were more likely at follow-up to report receiving these specific assessment or counseling interventions than at baseline, though even at follow-up, other than immunization-related counseling, only a minority of respondents reported receiving the service (Table 7.8).

Table 7.8 Percent distribution of RDW reporting about types of services or activities conducted by the health workers during their postnatal check ups in the baseline and follow up surveys, among RDW who were more than two months post-delivery and who visited a health facility for check ups

Types of activities conducted by the health worker during postnatal checkup	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Examination of abdomen	4.7	5.3	5.6	17.5	8.1	6.2
Internal examination	2.7	3.3	2.0	4.8	4.8	2.7
Asked if you had excessive bleeding / severe abdominal pain	6.4	8.6	6.7	23.7	11.9	16.1
Counseled you about Family Planning	9.7	13.1	14.5	26.8	18.8	20.0
Counseled you about breastfeeding	15.4	19.4	26.8	46.8	30.2	43.6
Counseled you about immunization	81.8	94.4	88.1	91.7	89.3	98.8
Provided advice on newborn care	11.5	28.3	29.9	49.0	33.4	47.1
Total (n)	**637**	**695**	**612**	**630**	**749**	**660**

Post-natal check-ups

RDW more than two months post-delivery at the time of the survey were asked if they had taken their infant to a health facility within six weeks following birth. Almost all RDW reported such care-seeking in both the baseline (98%-99%) and follow up surveys (99%) (table not shown). RDW who took their child to a health facility were asked (by prompting) about type of activities done by the health worker during their baby's check ups. Almost all RDW reported that the infant was immunized, both at baseline and in the follow-up survey. For other practices, there was a mixed picture, with improvements in certain districts but not others. The proportion reporting receiving counseling on feeding increased and there were improvements in the proportion of health workers encouraging civil registration in Jhapa and Banke, but not in Kanchanpur. Taking the baby's weight was done more routinely at follow-up than baseline in Jhapa and Kanchanpur, but did not change in Banke. The proportion of babies receiving a physical exam increased in Banke and Kanchanpur, but not Jhapa (Table 7.9).

Table 7.9 Percent distribution of RDW reporting about types of services or activities conducted by the health workers during their baby's check ups, among RDW who were more than two months post-delivery and who visited a health facility with their child for postnatal check ups

Types of activities conducted by the health worker during baby's checkup	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Baby's name entered in health post register	97.9	98.7	96.6	99.1	98.7	99.7
Health worker asked questions about baby's feeding habits	19.0	26.3	21.1	38.6	31.3	33.5
Baby was weighed and weight was recorded in register or other document	39.3	51.4	41.6	43.4	56.1	65.8
Baby was given vaccination	97.9	98.3	97.9	95.2	98.3	99.1
Baby received physical examination	13.1	16.8	21.3	41.5	13.6	32.7
Health worker encouraged you to register baby's birth	10.4	22.2	12.5	34.9	21.9	17.9
Total (n)	**662**	**697**	**615**	**648**	**748**	**660**

Use of iron/folic tablets and vitamin A capsules during postpartum period

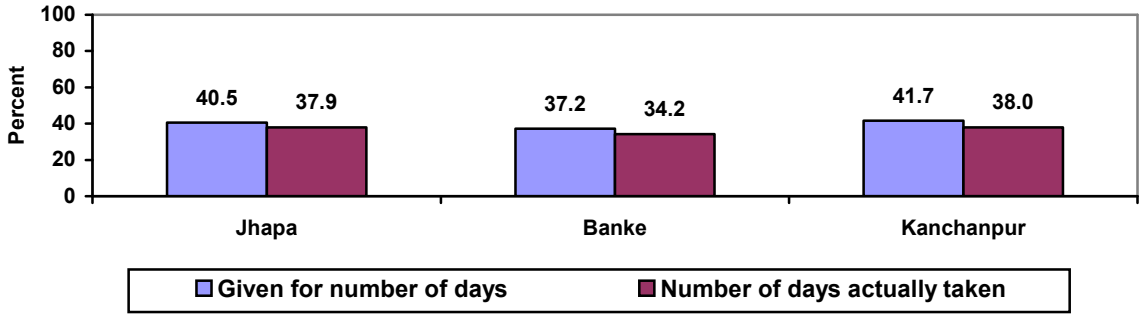
RDW (not counting those delivering still-births) were asked about the number of days they took iron/folic acid tablets following their most recent delivery. There were marked increase in the proportion of RDW who took iron folic tablets in all three districts (from 29% to 66% in Jhapa, from 21% to 60% in Banke and from 49% to 76% in Kanchanpur), with most reporting having received at least a months supply at follow-up (Table 7.10).

Table 7.10 Percent distribution of RDW receiving iron/folic acid tablets following their most recent delivery

Number of days taken iron folic tablets following most recent delivery	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Not taken at all	70.9	34.0	79.1	39.7	51.9	23.8
<30 days	9.2	12.7	6.3	14.9	16.4	17.1
30-45 days	15.9	51.8	12.6	44.3	29.0	58.8
46 days+	2.7	1.5	1.0	1.0	2.2	0.3
I have been taking	0.1	0.1	-	-	-	-
Do not know	1.2	-	1.1	0.1	0.4	-
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

Compliance was good across all three districts, with over 90% of all iron tablets received actually being consumed (Figure 7.2).

Figure 7.2 RDW who were given iron or folic tablets - average number of tablets and number of days actually taken during postpartum period



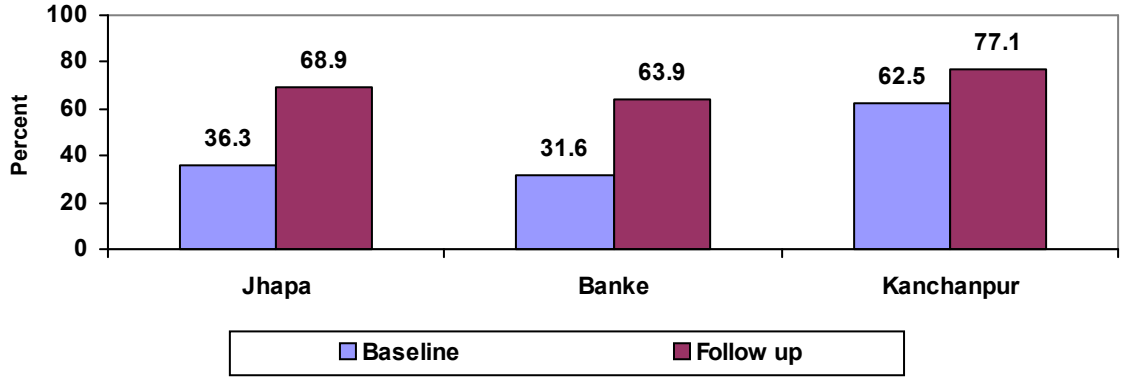
RDW reporting having received post-partum iron tablets were asked about the sources from which they obtained it. Most of them received it from FCHVs (Table 7.11).

Table 7.11 Percent distribution of RDW by source of supply of iron or folic acid tablets in the follow-up survey

Source of supply (Multiple Response)	Jhapa	Banke	Kanchanpur
FCHV	69.2	83.4	88.4
Hospital	9.4	6.4	4.0
Subhealth post	8.4	9.8	3.4
PHCC	8.2	1.5	3.2
Private clinic/nursing home	5.4	1.3	1.0
Health post	2.6	2.9	7.4
Pharmacy	2.6	1.5	1.5
PHC ORC	1.2	7.5	0.9
Other (TTBA/ MCHW/ neighbor)	3.0	0.2	0.3
Total (n)	**608**	**519**	**679**

In both the baseline and follow-up surveys, RDW were shown the 200,000 IU vitamin A capsule and asked if they had taken one within 42 days following their most recent delivery. The proportion reporting having taken it markedly increased from baseline, particularly in Jhapa and Banke where baseline levels were relatively low (Figure 7.3).

Figure 7.3 Percent distribution of RDW who took a Vitamin A capsules in the first 42 days after delivery in the baseline and follow up surveys, among those who delivered 2-11 months prior to the survey



(n=Jhapa (765 BS; 771 FS); Banke (706 BS; 722 FS); Kanchanpur (815 BS; 719 FS)

Receiving counseling on specific maternal danger signs or issues

RDW were asked whether they were counseled by health worker, FCHV or TBA on specific *maternal danger signs* or issues following their delivery. The possible answers were read out by the interviewer. One core indicator of the quality of counseling was percentage of RDW receiving post-natal care from a trained provider within six weeks of delivery who were counseled on at least two maternal danger signs or issues. The value of this indicator increased notably across all three districts (46% to 68% in Jhapa; 48% to 80% in Banke and 58% to 81% in Kanchanpur) (Table 7.12).

Table 7.12 Percent distribution of RDW who received specific counseling on maternal danger signs or issues from health worker, FCHV or TBA following their delivery in the baseline and follow up surveys

Type of counseling on maternal danger sings provided by health worker, FCHV or TBA	Jhapa		Banke		Kanchanpur	
	Baseline (n=889)	Follow up (n=892)	Baseline (n=827)	Follow up (n=831)	Baseline (n=896)	Follow up (n=891)
Excessive bleeding	29.7	56.8	26.4	69.9	42.2	63.3
Severe lower abdominal pain	27.3	56.1	28.1	65.3	39.5	63.2
Smelly discharge	22.0	46.2	19.7	52.2	29.6	45.5
Severe headache	22.3	45.7	21.5	57.2	32.7	48.0
High fever	22.7	44.5	23.7	62.9	29.7	53.0
Breast problems	20.2	42.5	17.0	48.0	28.9	47.1
Convulsions	17.5	35.7	13.3	46.5	27.3	33.4
Where to go for services	15.6	38.6	16.9	43.7	22.4	35.8

FCHVs in Jhapa were provided with a job aid to help counsel RDW and household members. In the follow-up survey, when asked only 12% of the RDW reported that they were shown the Job Aid card by the FCHVs during PNC visit indicating limited use of job aid card (table not shown).

Exposure to messages and awareness of timing for first check-up after delivery

RDW, MIL and husbands were asked *"within how many days after birth should mothers and newborns have their health checked by a health worker?"*. Although the proportions reporting that early health worker checkups were needed increased, levels remained low (Table 7.13).

Table 7.13 Percent distribution of RDW by opinion regarding the timing of first check ups by mothers and newborn from the health workers in the baseline and follow up surveys

Opinion regarding the timing of receiving health checked for the first time (in days)	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
One day	2.9	4.6	8.1	29.2	1.7	4.9
2-6 days	4.6	7.3	3.4	12.9	8.8	16.0
7-14 days	6.9	10.9	4.7	1.6	10.5	6.6
15-29 days	12.0	9.4	4.2	1.3	10.0	5.7
30-42 days	16.2	24.3	10.2	2.8	12.9	7.0
43 days +	5.6	8.0	3.9	0.8	2.9	1.9
Do not know	51.7	35.5	65.5	51.0	53.1	57.8
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

As in the case of RDW, only a small percentage of the husbands and MIL reported that a mother and newborn should receive check up from a health worker within the first week post-delivery (table not shown).

All three categories of respondents were also asked if they had heard the message "*mothers and newborns should have their health checked by a health worker with 24 hours (72 hours for the respondents of Kanchanpur) after birth*" from any sources in the past. Exposure to this message increased markedly but only in Banke was it reported by at least half of RDW. FCHVs, health workers and friends were the main sources of such information for RDW in all three districts (Table 7.14).

Table 7.14 Percent distribution of RDW who had heard the messages "mothers and newborns should have their health checked by a health worker with 24 hours (72 hours in Kanchanpur) after birth" in the baseline and follow up surveys

Heard of message	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Have heard the message	**21.9**	**35.4**	**19.3**	**50.2**	**16.9**	**26.5**
Source of exposure (Multiple Response)						
From FCHV	4.2	23.7	5.9	42.7	9.6	21.4
From health worker	7.9	15.5	5.9	26.2	4.0	6.4
Radio	11.6	11.1	9.4	11.0	3.6	5.9
From friends	5.7	8.6	3.1	15.6	2.1	5.1
TV	7.2	7.5	2.1	2.5	1.1	2.8
Other§	1.7	4.9	0.5	3.0	0.3	1.0
Have not heard the message	78.1	64.6	80.7	49.8	83.1	73.5
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

§ Other includes: newspaper; magazine; TBA; husband; sister-in-law; book; mother; father; poster; adult literacy class.

Among husbands and MIL in Jhapa and Kanchanpur, no marked changes were observed in exposure to the above messages between the two survey periods. However, such exposure among MIL and (especially) husbands did increase in Banke (Table 7.15).

Table 7.15 Percent distribution of husbands and MIL who had heard the messages "mothers and newborns should have their health checked by a health worker with 24 hours (72 hours in Kanchanpur) after birth" in the baseline and follow up surveys

Heard of message	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Have heard the message	**34.9**	**34.8**	**24.6**	**22.7**	**17.3**	**44.5**	**13.0**	**26.4**	**17.3**	**26.4**	**14.2**	**11.7**
Source of exposure (Multiple Response)												
Radio	20.9	18.6	9.8	8.8	11.9	12.9	3.9	3.5	8.0	11.6	4.7	4.5
From FCHV	4.1	10.1	2.7	9.2	1.8	22.4	3.9	20.9	3.1	9.9	7.1	6.9
From friends	7.5	11.1	8.3	7.2	3.2	16.5	4.7	8.9	2.8	8.2	3.0	2.4
TV	9.2	11.1	5.3	5.6	3.2	2.9	0.4	0.8	2.8	6.2	2.0	1.7
From health worker	10.6	9.5	10.2	9.2	2.5	20.6	3.5	9.3	4.5	6.5	1.7	2.7
Other§	2.1	5.1	0.8	2.4	0.4	4.8	-	0.4	1.4	3.1	0.3	0.7
Have not heard the message	65.1	65.2	75.4	77.3	82.7	55.5	87.0	73.6	82.7	73.6	85.8	88.3
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**

§ Other includes: newspaper; magazine; TBA; husband; sister-in-law; book; mother; father; poster; adult literacy class.

7.2 Danger signs during postpartum period

Knowledge about danger signs during postpartum period

RDW, husbands and MIL were asked to name symptoms experienced by a woman post-partum indicating a need for immediate health care. There was a marked increase between baseline and follow-up in RDW knowledge of such danger signs. Those RDW who correctly named three or

more post-partum danger signs increased sharply from 40% to 66% in Jhapa, from 58% to 84% in Banke and from 26% to 64% in Kanchanpur (Table 7.16).

Table 7.16 Percent distribution of RDW by knowledge of symptoms of the mother indicating the need for her to seek immediate health care during the six weeks after delivery in the baseline and follow up surveys

Types of the symptoms (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Excessive bleeding	75.1	77.2	76.8	88.3	72.2	86.0
Pain in lower abdomen or smelling vaginal discharge	50.8	62.3	62.5	66.3	54.6	59.1
High fever	49.3	61.1	68.4	85.8	34.7	70.0
Severe headache	27.2	49.6	38.5	56.1	21.8	47.4
Convulsion and fit	16.1	27.6	17.9	33.2	14.7	21.7
Severe edema (face and hand	-		-	-	-	21.5
Breast problem	-		-	-	-	7.5
Other §	13.0	11.7	11.5	1.8	5.1	3.8
Do not know	7.3	3.4	2.8	1.3	8.1	2.8
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

§ Other includes: swelling in hands and feet; pain in hands and leg; dizziness; swelling in body; uterus prolapsed; severe weakness; retention of placenta; vomiting; nausea; pain in body; waist pain; back pain; infection in breast; problems in breast; blurred vision; waist pain; less appetite; urinary problem; white vaginal discharge; high blood pressure; back pain; cold and cough; infection in uterus; diarrhea; jaundice.

Knowledge of post-partum danger signs also increased among husbands and MIL, although only modestly so in Jhapa (Table 7.17).

Table 7.17 Percent distribution of husbands and MIL by knowledge of symptoms of the mother indicating the need for her to seek immediate health care during the six weeks after delivery in the baseline and follow up surveys

Types of the symptoms (Multiple Response)	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Excessive bleeding	69.9	68.9	78.4	74.1	53.2	78.3	74.8	81.0	63.3	74.3	59.1	76.3
Pain in lower abdomen or smelly vaginal discharge	39.0	56.4	50.4	57.0	37.8	52.2	55.5	59.3	41.9	56.5	50.3	63.2
High fever	48.3	49.0	51.1	53.8	57.2	74.6	63.4	78.3	28.0	67.8	29.1	69.4
Severe headache	26.4	35.8	21.2	31.9	27.7	36.4	31.9	46.1	14.5	32.5	15.5	28.5
Convulsion and fit	17.1	22.6	14.4	20.7	13.7	36.0	13.4	29.1	11.8	17.8	14.5	15.1
Other§	15.7	13.8	14.4	18.4	9.7	2.7	9.5	3.5	13.1	5.5	13.2	8.8
Do not know	10.3	10.5	6.4	5.6	16.5	8.5	2.8	3.5	17.0	9.6	13.2	6.5
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**

§ Other includes: swelling in hands and feet; pain in hands and leg; dizziness; swelling in body; uterus prolapsed; severe weakness; retention of placenta; vomiting; nausea; pain in body; waist pain; back pain; infection in breast; problems in breast; blurred vision; waist pain; less appetite; urinary problem; white vaginal discharge; high blood pressure; back pain; cold and cough; infection in uterus; diarrhea; jaundice.

<u>Problems during postpartum period</u>

All RDW were asked if they had experienced any problems during the six weeks following their most recent delivery. Frequency of reported symptoms declined in Banke and Kanchanpur –

reasons for this are not entirely clear (Table 7.18). Further analysis indicates that the percentage of RDW who reported excessive bleeding over the six weeks postpartum was lower (10%) among those who used *Matri Suraksha Chaki* (MSC) tablets than those who did not use them (14%) (table not shown).

Table 7.18 Percent distribution of RDW who had experienced problems during six weeks following their most recent delivery in the baseline and follow up surveys

Types of problems experienced	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Severe lower abdominal pain	16.2	14.6	20.8	9.4	20.6	12.7
Excessive bleeding	14.6	13.1	19.5	11.7	12.4	9.1
High fever	12.8	8.9	16.0	4.5	9.3	4.3
Convulsions	5.5	4.0	4.0	3.4	6.3	2.1
At least one of the above problems	***30.3***	***27.1***	***33.1***	***20.2***	***28.2***	***20.0***
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

RDW experiencing one or more of the above-mentioned problems during six weeks following their most recent birth were asked about who they consulted or where they went for service. Care seeking increased, particularly in Banke and Kanchanpur (Table 7.19).

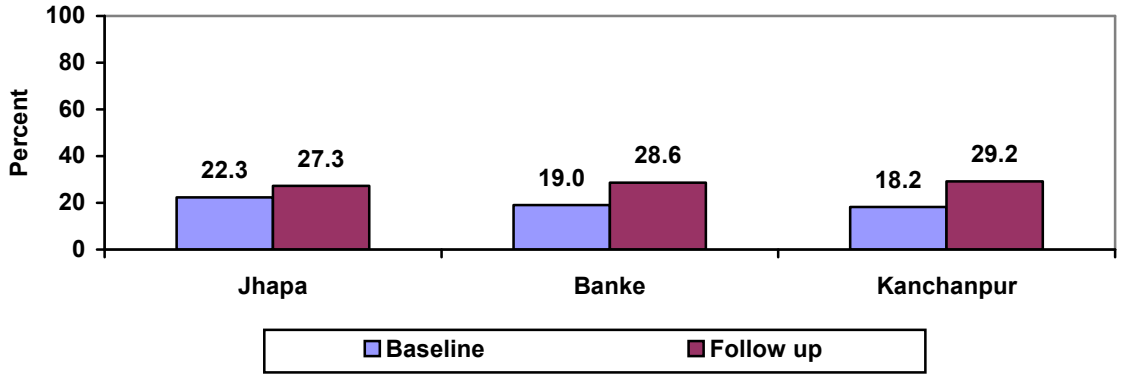
Table 7.19 Percent distribution of persons consulted or places visited by RDW when they had serious health problems within six weeks after their most recent birth in the baseline and follow up surveys

Places visited or persons consulted (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Bought medicine from pharmacy	21.2	21.1	36.1	34.5	17.0	19.1
PHCC /HP/ SHP	10.4	16.9	8.0	16.7	19.4	22.5
Private clinic/ nursing home	7.8	16.5	6.6	7.1	5.5	4.5
Traditional treatment at home	8.6	11.2	10.6	20.2	9.5	14.0
Hospital	10.8	9.9	4.4	7.1	5.9	12.4
Consulted dhami / jhankri	7.1	9.5	2.9	6.0	2.8	2.2
Consulted other HW	11.5	8.7	5.8	8.3	2.8	3.9
Consulted relative/neighbor/ friend	8.2	7.4	4.4	17.3	5.1	27.0
Consulted FCHV	2.2	6.2	3.3	12.5	5.5	11.2
Given medicine at home	3.0	4.1	2.9	14.3	2.4	4.5
Consulted MCHW	-	1.2	2.6	2.4	1.2	0.6
Consulted a TBA	1.1	1.2	1.1	1.2	1.6	1.7
Other§	0.4	1.7	0.7	3.6	5.1	2.8
Nothing	26.8	21.5	31.8	14.3	28.9	15.2
Total (n)	**269**	**242**	**274**	**168**	**253**	**178**

§ Other includes: medical shop; a person holding Diploma in pharmacy.

The surveys found that referral by health workers of first resort increased across all three districts (Figure 7.4).

Figure 7.4 Percent distribution of RDW who were referred or advised by the health worker to go to a health facility for treatment for the problems they experienced during six weeks following their most recent delivery in the baseline and follow up surveys



n= Jhapa (269 BS; 242 FS); Banke (274 BS; 168 FS); and Kanchanpur (253 BS; 178 FS)

7.3 Family support during postpartum period

Information on support received by RDW during the post-partum period was collected from all three types of respondents. The proportion receiving more food than usual and more post-partum support from family members increased notably in Banke and Kanchanpur, remaining at a similar level in Jhapa, where it was already high at baseline (Table 7.20).

Table 7.20 Percent distribution of RDW by amount of food they consumed and amount of support received during the first six months after their most recent delivery in the baseline and follow up surveys, among RDW with live birth

Description	Jhapa		Banke		Kanchanpur	
	Baseline (n=889)	Follow up (n=892)	Baseline (n=827)	Follow up (n=831)	Baseline (n=896)	Follow up (n=891)
Amount of food consumed						
Less than usual	8.7	7.7	14.5	3.7	14.6	7.1
Same as usual	17.5	18.2	24.4	16.5	37.9	20.7
More than as usual	73.8	73.9	61.1	79.8	47.4	72.1
Do not know	-	0.2	-	-	-	0.2
Amount of support received from family members						
Less than usual	1.7	0.4	4.2	0.8	11.7	1.9
Same as usual	12.5	14.8	35.4	17.2	40.3	21.8
More than as usual	85.8	84.8	60.3	81.9	48.0	76.3

RDW in Jhapa and Banke were asked about type of support and who provided it over the first six weeks after the birth. A high proportion reported receiving support of the following kinds from family members a) advise to take more rest (84%-88%), b) more nutritious food (77%-85%), c) more food to eat (87%-88%), and d) reducing heavy work (70%) (Table 7.21).

Table 7.21 Percent distribution of RDW by type of support received from the family members during their first six weeks following the delivery of the last child in the baseline and follow up surveys

Description	Jhapa		Banke	
	Baseline (n=763)	Follow up (n=756)	Baseline (n=499)	Follow up (n=681)
Types of care/support received from your family members (Multiple Response)				
Advised for more rest	88.6	87.6	84.2	84.0
Given more food to eat	71.3	87.4	82.8	87.7
Given more nutritious food to eat	87.5	85.1	88.2	77.4
Reduced heavy load	73.9	70.0	74.3	69.9
Advised/accompanied for check-up	8.1	11.6	10.6	13.2
Persons who provided cares/supports (Multiple Response)				
Husband	74.8	82.9	84.2	88.3
Mother-in-law	48.6	47.6	50.7	49.2
Sister-in-law	26.6	25.7	28.3	39.6
Father-in-law	17.8	15.2	19.2	12.3
Mother	10.5	15.7	5.8	7.8
Other family member	8.3	11.8	5.8	5.9
Daughter	6.8	6.2	8.8	6.5
Son	2.4	3.2	4.2	2.9
Other (neighbor/ household helper)	0.4	-	0.6	0.4

Respondents were also asked where one could go for health services in case of post-partum danger signs. The most notable change was in perceptions about the hospital as a suitable source of care (Table 7.22). For husbands and MIL, between baseline and follow-up there was increased awareness of all of these sites as possible sources of post-partum care (table not shown).

Table 7.22 Percent distribution of RDW by knowledge about the availability of services for the management of danger signs that may appear during six weeks following the delivery in the baseline and follow up surveys

Source of services for the danger signs (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Hospital	27.0	47.4	49.9	78.1	27.5	73.3
Private clinic/ nursing home	23.5	37.4	23.6	24.4	8.4	19.9
PHCC	27.3	33.3	3.3	7.7	28.8	29.0
Sub-health post	23.6	29.3	40.5	45.7	25.8	31.3
Health post	17.9	18.0	23.8	30.3	35.6	39.2
PHC ORC	0.7	3.7	1.8	12.6	2.5	5.9
ANM or CMA or shopkeeper from medical shop	2.7	2.1	11.0	10.8	8.8	7.4
Other§	0.4	0.4	0.6	2.2	0.1	2.0
Do not know	-	-	0.1	0.1	0.1	-
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

§ Other includes: FPAN clinic; Marie stopes clinic; MCHW; traditional healers; person working in the medical field in the village.

7.4 Knowledge about postpartum hemorrhage and use of misoprostol

Postpartum hemorrhage (PPH) is the leading cause of maternal death in Nepal. NFHP implemented a PPH prevention pilot in Banke, using misoprostol, referred to in the project as *Matri Suraksha Chaki* (MSC), meaning mother's safety pill. Three tablets of MSC are given immediately after delivery, to help contract the uterus and limit bleeding. Issues related to PPH and misoprostol are thus explored in some depth in this survey.

a) Knowledge of postpartum hemorrhage

In order to assess changes in the level of awareness of respondents with regard to postpartum hemorrhage respondents were asked several questions related to bleeding after childbirth. About two-thirds (64%-73%) of respondents of all three categories in Jhapa and over three-quarters (76%-89%) in Banke reported having received information about bleeding after childbirth during their or their wives/DIL's last pregnancy. A higher proportion of RDW in both districts reported having received such information than did husbands or MIL. Table 7.23 reveals a substantial increase from baseline.

Table 7.23 Percent distribution of RDW, husbands, and MIL who had been exposed to information about bleeding after childbirth during their or their wives/DIL's last pregnancy in the baseline and follow up surveys

Type of information received (Multiple Response)	Jhapa						Banke					
	RDW		Husband		MIL		RDW		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Can cause death	47.0	66.7	42.5	64.2	45.1	62.2	58.7	84.9	50.7	72.1	47.2	76.7
Go to health facility promptly	34.3	49.6	32.9	46.3	30.7	37.8	41.7	64.5	32.7	49.3	29.9	50.8
Get help from health worker	15.8	18.9	14.0	22.0	12.9	19.1	17.6	38.5	14.7	31.3	11.4	31.4
Causes weakness	1.9	7.1	1.4	7.4	1.1	4.8	2.5	3.9	2.2	2.6	2.0	4.3
Dizziness	-	0.8	-	1.0	-	1.6	0.8	0.8	0.4	-	0.8	2.3
Other§	0.9	1.0	0.3	0.7	0.4	0.4	0.5	0.5	-	-	0.4	0.4
No	45.0	25.7	51.4	29.4	49.6	31.5	36.0	10.8	44.2	22.8	46.9	18.2
Do not remember	1.1	1.8	1.7	3.4	1.9	4.4	1.0	-	1.8	1.1	3.5	0.8
Total (n)	**900**	**900**	**292**	**296**	**264**	**251**	**840**	**840**	**278**	**272**	**254**	**258**

§ Other includes: unconsciousness; possibility of fetus death; blurred vision; should take medicines to control bleeding; should consult traditional healers; cause anemia.

RDW, husbands and MIL who reported having received information during their or their wives/DIL's last pregnancy about post-partum bleeding were asked what information they had received. Over six in ten respondents of all three categories reported to have heard that such bleeding could cause maternal death; about half reported that such bleeding required promptly going to a health facility. About one-fifth (19%-22%) of respondents in Jhapa and about one-third in Banke (31%-39%) reported having heard about the need for getting help from health workers. The proportion of respondents from both districts giving such responses was much higher at follow-up than at baseline (Table 7.23).

Respondents who reported having received information about bleeding after childbirth were further asked about the sources from which they received this information. In Jhapa, the most important sources were radio and neighbor/ family members. In Banke, the most important were FCHVs and neighbor/ family members (Table 7.24).

Table 7.24 Percent distribution of RDW, husbands and MIL by their sources of information about bleeding after childbirth in the baseline and follow up surveys

Source of information (Multiple Response)	Jhapa						Banke					
	RDW		Husband		MIL		RDW		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Radio	54.0	57.1	65.0	74.9	54.7	59.6	45.5	53.7	57.3	67.6	34.9	31.6
Neighbor/family/ friend/ relative	62.1	48.9	48.9	41.7	61.7	73.9	58.1	61.8	57.3	64.7	68.3	69.9
FCHV	16.9	46.9	11.7	25.1	12.5	23.0	28.9	83.3	12.0	51.2	17.5	59.3
Television	31.3	44.3	38.7	54.3	44.5	42.9	10.6	12.8	14.7	16.9	10.3	13.4
BPP Key Chain	NAP	36.8	NAP	14.6	-	5.6	NAP	61.8	NAP	43.5	NAP	27.8
Health worker	20.6	23.4	24.8	29.6	18.0	13.7	25.7	28.6	16.7	24.2	14.3	13.9
Health facility	8.5	7.0	6.6	5.5	5.5	3.1	7.9	5.6	2.7	7.2	4.0	1.4
Poster	1.0	6.6	2.9	11.6	1.6	1.9	1.7	8.0	5.3	20.3	-	1.9
MG meeting	NAP	3.7	NAP	NAP	NAP	NAP	NAP	13.6	NAP	NAP	NAP	NAP
Pamphlet/flyer	1.0	2.9	8.0	3.0	0.8	-	0.4	1.7	2.7	5.3	-	0.5
Wall painting	NAP	1.5	NAP	NAP	NAP	NAP	NAP	2.7	NAP	NAP	NAP	NAP
Women's group	1.0	0.3	0.7	0.5	0.8	0.6	2.8	1.6	-	0.5	2.4	1.4
Street Theatre	NAP	0.5	NAP	NAP	NAP	NAP	NAP	1.9	NAP	NAP	NAP	NAP
I myself aware of the problem	0.8	-	-	-	0.8	-	1.3	0.3	0.7	1.0	2.4	6.2
Other§	4.1	2.6	3.6	7.5	1.6	1.2	3.8	1.1	4.0	3.9	2.4	1.0
Total (n)	**485**	**653**	**137**	**199**	**128**	**161**	**530**	**749**	**150**	**207**	**126**	**209**

§ Other includes: training; newspaper; magazine; street drama; books; TBA; UNICEF; adult literacy class; mother's group; MCHW; experienced person; radio listening group.

b) Receiving information about medicines for reducing bleeding after childbirth

Respondents were asked if they or their wives/DIL had received any information about a medicine that could be taken to reduce bleeding after childbirth. The proportion reporting being aware of such a medication in Jhapa was about a quarter of husbands and nearly one-fifth of the RDW and MIL; in Banke three-quarters of RDW and almost two thirds of husbands and MIL (Table 7.25).

Table 7.25 Percent distribution of RDW, husbands and MIL who had heard about a medicine that can be taken to reduce bleeding after childbirth during their or their wives/DIL's last pregnancy in the baseline and follow up surveys

Receiving information about medicines for reducing bleeding after childbirth	Jhapa						Banke					
	RDW		Husband		MIL		RDW		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Yes	16.0	18.8	15.8	26.0	18.9	15.5	22.7	74.9	21.9	61.8	18.5	62.4
Do not remember	3.2	14.7	2.4	15.2	3.4	15.1	2.4	2.1	2.2	3.3	3.1	5.0
Total (n)	**900**	**900**	**292**	**296**	**264**	**251**	**840**	**840**	**278**	**272**	**254**	**258**

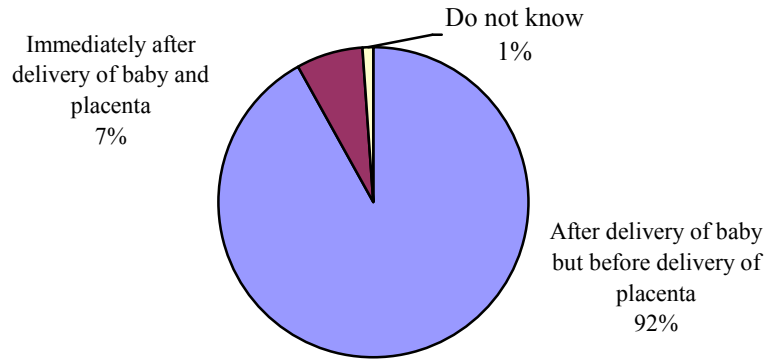
Banke respondents were asked, "*why should a woman take MSC?*" Almost all RDW (96%) and over 60% of the husbands and MIL knew that the women should take MSC to prevent postpartum hemorrhage (PPH) (Table 7.26).

Table 7.26 Percent distribution of RDW, husbands and MIL by knowledge about the purposes of taking MSC in the follow up survey, Banke

Knowledge about purposes of taking MSC (Multiple Response)	RDW	Husband	MIL
Prevention of PPH	96.1	60.4	61.2
Prevent from risk of death	45.5	28.9	26.0
Discharge of placenta	34.1	10.4	18.6
Contraction of uterus	24.1	8.1	9.7
Other (to prevent from weakness/ to relief from pain)	0.5	0.4	-
Do not know	1.5	38.1	37.2
Total (n)	**615**	**270**	**258**

RDW who had taken MSC in Banke (n=615) were asked about correct timing. The great majority of the RDW (92%) correctly stated that MSC should be taken immediately after delivery of the baby. Seven percent said that the medicine should be taken immediately after discharge of the placenta (Figure 7.5). The great majority (96%) of the RDW who have taken (n=615) knew about the correct dose of the MSC to be taken i.e. three tablets at one time (table not shown).

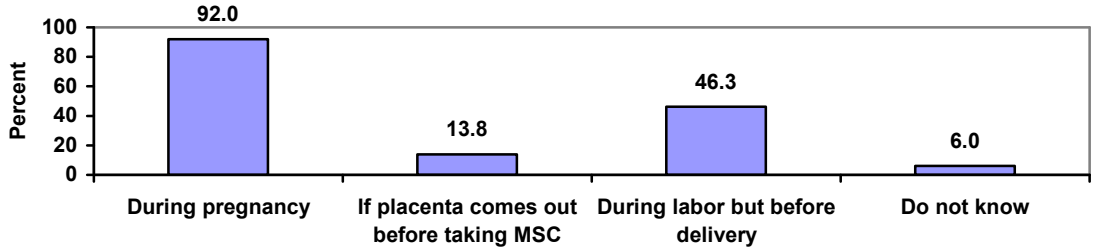
Figure 7.5 Percent distribution of RDW mentioning the time when a woman should take MSC, among those who had taken MSC, Banke



n=615

RDW who had taken MSC were asked about when a woman should not take MSC tablets. The great majority (92%) of the RDW reported that a woman should not take MSC *during pregnancy*; 46% mentioned during labor but before delivery as a time when MSC should not be taken. About 14% said (incorrectly) that one should not take MSC tablets if the placenta has already come out (Figure 7.6).

Figure 7.6 Percent distribution of RDW mentioning conditions under which a woman should not take MSC tablets, among those who had taken MSC, Banke



n=615

Just over one-third of RDW who took MSC were able to mention at least one possible side effect (Table 7.27). On the question what should a woman do if she took MSC tablets but still experienced heavy bleeding, almost all (98%) respondents correctly stated that the women should go to a health facility for care (table not shown).

Table 7.27 Percent distribution of RDW by knowledge about the problems or side effects from the use of MSC tablets, Banke

Knowledge about problems/side effects of MSC (Multiple Response)	Percent
Shivering	22.3
Nausea	13.7
Fever	12.7
Headache	12.5
Watery stool	7.8
Other (nothing/ cold/ dizziness/ weakness)	1.6
Do not know	64.7
Total (n)	**615**

c) Use of MSC tablets

Banke respondents were asked if they or their wife/DIL received MSC tablets during last pregnancy. Nearly three-quarters (73%) of the RDW followed by 67% MIL and 63% husbands reported that they or their wife/DIL had received MSC tablets. RDW who reported not receiving tablets (n=225) were asked the reasons. The most frequently cited were (table not shown):

- Lack of knowledge (58%)
- No contact with FCHV or do not know her (16%)
- FCHV was out of stock (15%)
- Other: premature birth, lack of time, away from home (9%)

Table 7.28 further shows information on use of MSC tablets by RDW according to their background characteristics. Access to this service appears to have been equitable with regard to wealth and caste-ethnicity.

Table 7.28 Percent distribution of RDW who received and took MSC tablets by their selected background characteristics, Banke

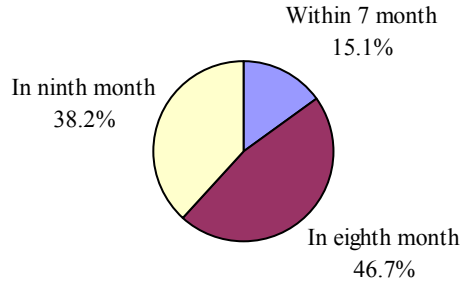
Background characteristics		Receiving MSC	Taking MSC
Age of RDW (in years)		ns	*
15-19		68.6	39.3
20-24		71.7	50.0
25-29		76.8	61.2
30-34		71.0	57.1
35-49		80.6	65.6
Literacy		ns	*
Illiterate		74.7	60.1
Literate		70.7	42.0
Ethnicity		*	*
Brahmin/Chhetri		65.4	38.8
Tibeto-Burman		72.2	50.9
Tharu		76.2	59.4
Dalit		68.4	47.4
Muslim		76.1	61.9
Other terai origin		84.9	66.7
Other		Φ	Φ
Number of living children		ns	*
<2 children		72.0	40.6
2-3 children		74.4	59.2
4 children or more		72.7	61.7
Place of delivery			*
At health facility			3.7
At home with a SBA			Φ
At home without SBA			63.4
SES Index		ns	ns
Lowest		69.0	54.5
Second		66.3	49.4
Middle		77.1	60.6
Fourth		75.6	55.6
Highest		76.5	48.5
Total	**(%)**	**73.2**	**53.4**
	(n)	**840**	**831**

**Significant at <.05 level ns= Not significant*

Φ indicates that a figure is based on fewer than 25 cases and are not shown

RDW who reported receiving MSC (n=615) were asked about when they received MSC. Nearly half (47%) reported having received it when they had been pregnant for *eight* months, as per protocol. Another 38% reported receiving the medicine during the *ninth* month of pregnancy and 15% at the seventh month (Figure 7.7).

Figure 7.7 Percent distribution of RDW by time when they received MSC tablets from FCHVs during their last pregnancy, Banke

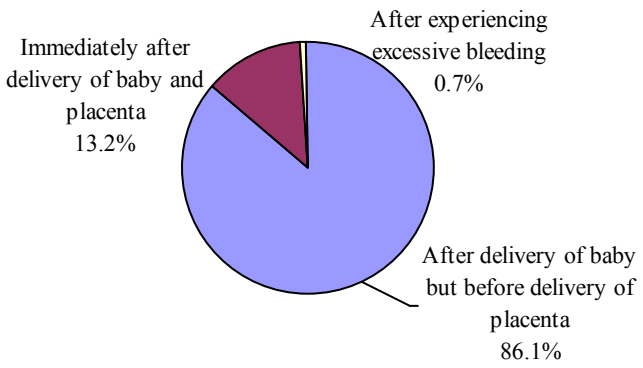


n=615

RDW reporting receiving MSC tablets were asked if their FCHV told family members about the MSC tablets. 72% of the 615 RDW said "*yes*" (table not shown).

Of the 615 RDW who reported receiving MSC tablets, about three-quarters (73%) actually took the MSC tablets. Among those who consumed the tablets (n=447), the great majority (86%) did so at the appropriate time, i.e. after delivery of baby but before delivery of placenta; another 13% consumed it immediately after delivery of baby and placenta (Figure 7.8). Three RDW (1%) who reported consuming them late (after excessive bleeding) also reported not receiving adequate information about MSC from FCHVs including appropriate time of taking the tablets. RDW who reported to have taken MSC tablets (n=447) were asked about the number of tablets consumed. Almost all (98%; or n=439) reported taking the appropriate dose (3 tablets). Four RDW, however, reported having taken only one or two tablets.

Figure 7.8 Percent distribution of RDW time when they consumed MSC tablets during their last delivery, Banke



n=447

Of the 615 RDW who received MSC tablets, 168 did not consume it at all and another eight did not consume the full recommended dose (*3 tablets*). These respondents were asked about the reasons for not consuming the tablets. More than half (55%) did so because their delivery was performed at a health facility and they were administered an injection after the delivery. Other respondents also said that they forgot to take it (10%), the placenta came out before they were

ready to take the medicines (6%) and they were afraid of side effects (5%). All the women receiving MSC are supposed to be instructed to return the MSC tablets to their respective FCHVs if they were not used. Of those who received MSC tablets but did not use them more than three-quarters (76%) said they returned the tablets to FCHVs and another 4% returned them to other health workers (Table 7.29).

Table 7.29 Percent distribution of RDW by reasons for not taking MSC tablets received from FCHVs, Banke (n=176)

Description	Percent
Reasons for not taking MSC tablets received from FCHVs	
Delivery at HF or trainer provider came for delivery	54.5
Health worker gave injection after delivery	54.5
Forgot to take	9.7
The placenta came out before I could take MSC	6.3
Fear of side-effect	4.5
Misplaced the MSC tablets	2.3
Delivery at others home	1.7
Lost the tablets (some or all)	1.7
Person who kept MSC was not present during delivery	1.1
Family members did not allow	0.6
The FCHV did not bring me the MSC on time	0.6
Baby was born dead	0.6
Other (got 2 tablets; got 1 tablet; thought that 2 tablets will be enough)	3.4
What did you do with the unused MSC tablets?	
Returned to FCHV/HW	80.1
Still with me	10.8
Lost/misplaced	5.7
Threw away	2.3
Other (given only 2 tablets)	1.1

7.5 Immediate newborn care

Information related to materials to be used for cord cutting, clean delivery kits, timing of the newborn's first bath, initiation of breastfeeding including colostrum feeding, and drying and wrapping the newborn were collected from RDW.

Cord cutting and use of clean delivery kits

The cord should be cut with a new or sterilized blade and current recommendations call for nothing to be applied to the cord stump. RDW were asked about the use of clean home delivery kits or clean/new instrument to cut the cord. The use of either CHDK or clean instruments such as new or boiled blade to cut the cord of the newborn baby was quite high (94%-98%) in all three districts (Table 7.30).

Table 7.30 Percent distribution of RDW who used a clean home delivery kit or newborn's cord was cut with a clean or new instrument during last delivery in the baseline and follow up surveys

District	Use of CHDK		Use of CHDK or clean instruments	
	Baseline	Follow up	Baseline	Follow up
Jhapa	32.3	16.7	93.1	94.4
Banke	24.2	43.3	96.1	97.7
Kanchanpur	43.2	39.1	95.8	95.7

Table 7.31 shows use of clean health delivery kits or other clean instruments to cut the cord of the newborn by selected background characteristics.

Table 7.31 Percent distribution of RDW who used a clean home delivery kit or newborn's cord was cut with a clean or new instrument during last delivery by selected background characteristics in the baseline and follow up surveys

Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	ns	*	ns	ns	*	ns
15-19	95.3	96.6	94.5	94.9	98.3	96.9
20-24	93.4	95.2	95.4	98.2	96.4	97.7
25-29	93.0	94.4	97.6	97.8	96.1	94.2
30-34	91.4	94.3	96.4	100.0	92.8	91.1
35-49	91.2	84.0	97.3	96.7	88.9	93.2
Literacy	*	*	ns	**ns**	*	*
Illiterate	89.4	90.1	96.4	98.1	94.2	94.2
Literate	95.9	97.4	95.5	97.1	97.6	97.6
Ethnicity	*	*	ns	ns	**ns**	**ns**
Brahmin/Chhetri	97.4	97.9	94.4	95.2	97.0	95.2
Tibeto-Burman	92.9	96.6	90.9	94.3	97.8	97.5
Tharu	88.5	90.0	94.8	98.4	95.4	97.3
Dalit	91.1	93.8	95.8	96.5	92.7	94.2
Muslim	87.3	89.2	99.0	100.0	◆	◆
Other terai origin	92.7	91.6	99.0	100.0	◆	◆
Other	96.6	98.3	◆	◆	◆	◆
Number of living children	*	*	ns	ns	*	*
<2 children	96.1	96.6	93.8	97.5	97.8	97.4
2-3 children	90.8	93.7	97.1	97.6	96.2	96.2
4 children or more	91.9	88.7	96.8	98.3	91.8	92.1
SES Index	*	*	ns	**ns**	*	*
Lowest	87.8	89.4	93.7	98.4	92.6	91.8
Second	92.8	91.4	95.7	97.1	94.6	95.0
Middle	92.6	94.4	96.4	97.0	94.7	97.3
Fourth	95.6	98.2	97.5	97.7	98.8	96.8
Highest	97.6	97.9	98.5	98.5	97.9	98.2
Total (%)	**93.1†**	**94.4†**	**96.1†**	**97.7†**	**95.8†**	**95.7†**
(n)	**889**	**892**	**827**	**831**	**896**	**891**

**Significant at <.05 level ns= Not significant*
◆ indicates that a figure is based on fewer than 25 cases and are not shown
†Pre-post (Jhapa p= 0.445; Banke p=0181 ; and Kanchanpur p=0.985)

RDW who had not used clean home delivery kits were asked about the materials used to tie the cord. It is assumed that RDW who deliver in health facilities have the cord tied with a new or sterilized string or thread. Among RDW who delivered a live newborn at home, more than 90% reported that a CHDK, "new thread", or "boiled string or thread" was used (table not shown).

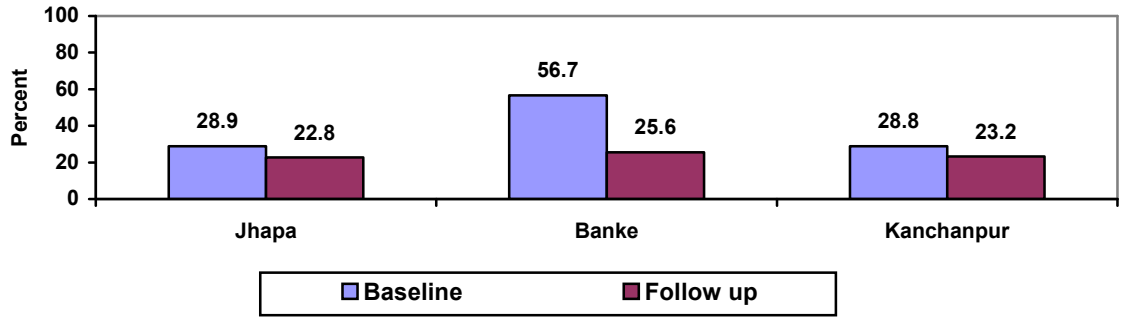
We also asked RDW who delivered their last baby at home and did not use clean delivery kits about the type of surface on which the cord was cut. The most common responses were metal coin, wood or nothing (Table 7.32).

Table 7.32 Percent distribution of RDW by type of surface used for cutting baby's cord, among RDW who delivered at home and who did not use clean delivery kits (follow-up survey only)

Type of surface used to cut cord	Jhapa	Banke	Kanchanpur
Metal coin	45.6	23.6	24.6
Clay pot/ Handi	9.5	0.3	-
Plastic disc	3.3	3.9	1.7
Wood	2.4	24.6	47.3
Other (cloth; bamboo; plate; Tapari; floor)	5.3	1.8	**1.7**
Nothing	18.3	40.3	18.3
Do not know	15.6	5.5	6.5
Total (n)	**454**	**382**	**480**

RDW were also asked about substances applied to the cord stump. The percentage of RDW who applied any substances to the baby's cord stump dropped sharply, particularly in Banke where this practice was widespread across all socio-economic strata at baseline (Figure 7.9).

Figure 7.9 Percent distribution of RDW who applied anything on the stump after the baby's cord was cut in the baseline and follow up surveys



n= Jhapa (889 in BS, 892 in FS); Banke (827 in BS, 831 in FS); Kanchanpur (896 in BS, 891 in FS)

Table 7.33 shows application of substances to the cord stump by selected background characteristics.

Table 7.33 Percent distribution of RDW who applied anything on the stump after the baby's cord was cut by selected background characteristics in the baseline and follow up surveys

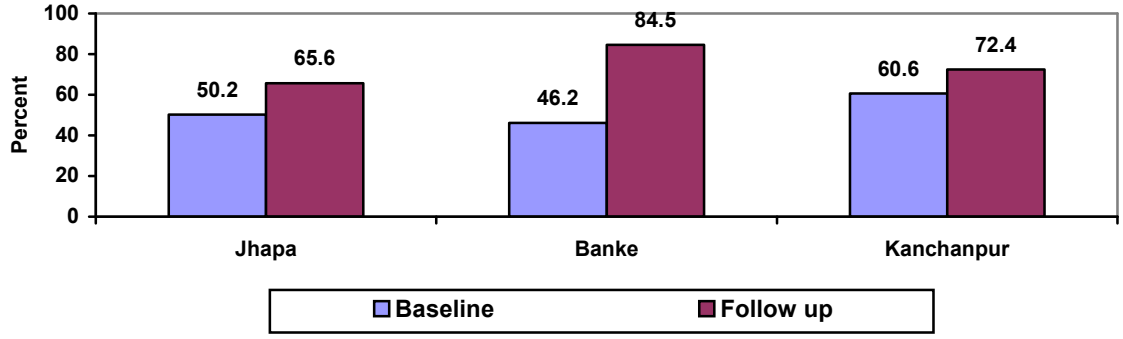
Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	ns	ns	*	*	ns	*
15-19	25.5	17.9	48.8	24.8	31.9	17.3
20-24	27.2	21.1	51.7	23.4	26.0	20.6
25-29	31.0	23.4	58.8	27.2	29.9	25.2
30-34	32.3	30.5	65.2	25.3	33.7	28.9
35-49	30.9	26.0	72.0	34.4	31.5	40.9
Literacy	*	*	*	*	*	*
Illiterate	39.9	31.1	65.2	32.1	34.4	25.5
Literate	20.7	17.0	36.6	14.7	22.2	20.5
Ethnicity	*	*	*	*	*	ns
Brahmin/Chhetri	15.9	12.9	39.1	12.8	18.4	21.4
Tibeto-Burman	15.0	13.6	25.0	22.6	28.9	27.5
Tharu	38.5	22.5	52.9	23.4	45.1	27.6
Dalit	33.0	18.6	64.7	36.8	20.6	18.1
Muslim	47.6	48.2	75.1	33.2	ϕ	ϕ
Other terai origin	58.3	45.3	62.5	25.8	ϕ	ϕ
Other	22.0	23.7	ϕ	ϕ	ϕ	ϕ
Number of living children	*	*	*	*	*	*
<2 children	24.0	18.3	43.6	226	28.1	20.2
2-3 children	30.3	24.6	56.0	26.0	27.5	23.8
4 children or more	38.7	32.1	71.8	29.7	32.7	26.6
SES Index	*	*	ns	*	ns	*
Lowest	43.7	35.4	56.5	30.1	28.8	25.3
Second	38.3	29.9	65.6	32.4	34.8	30.0
Middle	25.9	21.2	55.7	26.1	29.6	22.5
Fourth	19.2	19.4	56.3	25.7	31.4	21.5
Highest	14.9	10.1	47.7	16.8	19.1	17.2
Place of delivery	*	*	*	*	*	*
At health facility	12.0	10.1	28.9	5.2	8.3	10.4
At home with a SBA	ϕ	32.4	ϕ	ϕ	24.1	12.2
At home without SBA	38.1	32.0	60.2	29.8	32.6	28.4
Total (%)	**28.9†**	**22.8†**	**56.7†**	**25.6†**	**28.8†**	**23.2†**
(n)	**889**	**892**	**827**	**831**	**896**	**891**

**Significant at <.05 level ns= Not significant*
ϕ indicates that a figure is based on fewer than 25 cases and are not shown
†Pre-post (Jhapa p= 0.033; Banke p=0.000; and Kanchanpur p=0.043)

Drying, wrapping and bathing the newborn

To avoid dangerous chilling, the newborn should be dried and wrapped immediately after birth, before the placenta is delivered. As with cord-stump care there were also significant improvements on this indicator, particularly in Banke. Figure 7.10 shows the data for drying. The results for wrapping were essentially identical (table not shown).

Figure 7.10 Percent distribution of RDW who dried their newborn before the placenta was delivered in the baseline and follow up surveys



n= Jhapa (889 BS, 892 FS); Banke (827 BS, 831 FS); Kanchanpur (896 BS, 891 FS)

RDW were asked where their newborn was placed after delivery but before the placenta was delivered. The practice of just leaving the baby on the cot or on the floor declined significantly, though less so in Kanchanpur (Table 3.34).

Table 7.34 Percent distribution of RDW regarding the placement of their newborn before the placenta was delivered in the baseline and follow up surveys

Places where the baby was placed before the placenta was delivered	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
With someone else	15.1	28.1	9.1	40.7	4.5	16.2
On the floor	45.0	26.3	55.7	23.6	45.8	33.7
With the mother	11.4	21.2	10.2	18.2	5.0	10.9
On the cot	23.3	14.8	21.9	16.7	41.0	34.9
Other§	0.3	2.6	1.8	-	3.0	2.1
Do not know	4.9	7.0	1.3	0.8	0.8	2.2
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

§ Other includes: on the mat; on the jute mat; on the Nanglo; on the lap of husband; on the seat of ambulance.

Again to avoid dangerous chilling of the newborn, the first bathing should be delayed till no earlier than 24 hours following delivery. The proportion of respondents aware of this recommendation increased significantly, though more modestly in Kanchanpur (where the correct response was already fairly common at baseline) (Table 7.35).

Table 7.35 Percent distribution of RDW reporting the timing of bathing the newborn after the birth in the baseline and follow up surveys

Opinion on appropriate timing for first bathing of newborn	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Immediately after the birth	50.6	20.2	46.1	14.8	44.4	17.8
Within 24 hours after birth	32.1	19.0	34.4	7.5	15.3	9.1
After 24 hours after birth	10.0	56.4	13.0	76.0	36.4	69.0
Should not be bathed	-	0.2	0.4	0.1	0.3	0.1
Other§	-	0.3	4.3	0.1	-	0.2
Do not know	7.3	3.8	1.9	1.5	3.4	3.8
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

§ Other includes: after umbilical cord was cut; immediately after the placenta is out; after half an hour; after one hour.

Although the level of awareness of husbands and MIL about appropriate timing for first bath increased sharply (though, again, somewhat less markedly in Kanchanpur), still more than half of respondents were found to be unaware (Table 7.36).

Table 7.36 Percent distribution of husbands and MIL reporting appropriate timing of bathing the newborn after the birth in the baseline and follow up surveys

Opinion on the timing of first bathing the newborn	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Immediately after birth	50.7	27.4	58.0	34.7	46.4	26.5	57.9	33.7	45.0	27.7	58.4	43.3
Within 24 hours after birth	27.7	23.6	32.6	24.3	30.6	12.9	29.5	13.6	22.5	19.5	15.9	12.7
After 24 hours after birth	11.3	41.6	8.0	36.7	12.2	54.0	7.1	51.2	24.2	39.4	24.3	40.2
Should not be bathed	-	-	0.4	-	-	-	0.4	0.4	0.3	-	-	-
Other§	0.3	0.3	-	2.4	1.5	0.4	4.7	-	0.3	-	-	-
Do not know	9.9	7.1	1.1	2.0	9.4	6.3	0.4	1.2	7.6	13.4	1.4	3.8
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**

§ Other includes: after cutting of umbilical cord; after one hour.

RDW in Kanchanpur were asked from what source they had heard that "*a newborn should have their first bath delayed until at least 24 hours after birth*". Exposure to this message markedly increased, with FCHVs as the principal source (Table 7.37).

Table 7.37 Percent distribution of RDW who had heard the messages " a newborn should have their first bath delayed until at least 24 hours after birth" in the baseline and follow up survey, Kanchanpur

Heard the message (Multiple Response)	Baseline	Follow up
Have heard the message	**50.2**	**81.1**
Sources (Multiple Response)		
From FCHV	29.9	61.7
From health worker	14.8	28.2
From friends	8.0	20.3
Radio	7.1	20.3
Television	2.8	7.0
Other§	2.1	3.7
Have not heard the message	49.8	18.9
Total (n)	**900**	**900**

§ Other includes: training; TBA; mothers group members; newspaper; magazine; husband; school; mother-in-law/ flip chart; book.

RDW were asked about actual practice with regard to delayed bathing. As with knowledge (Table 7.35) there was a substantial shift towards the recommended behavior (though somewhat more modest in Kanchanpur, where delayed bathing was already fairly common at baseline) (Table 7.38).

Table 7.38 Percent distribution of RDW by time when they first bathed their youngest child in the baseline and follow up surveys

Timing of baby bathed for the first time after birth	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Within 1 hour	44.8	18.8	53.8	21.5	44.3	20.5
2-24 hours	32.7	27.5	30.8	12.4	15.6	18.9
After 24 hours	17.4	51.0	13.8	64.6	38.4	59.6
Do not know	5.1	2.7	1.6	1.4	1.7	1.0
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

Table 7.39 shows delayed bathing by characteristics of the RDW. There were significant shifts across all strata, with some remaining differentials by socio-economic status, at follow-up.

Table 7.39 Percent distribution of RDW who first bathed their baby 24 hours after birth by selected background characteristics in the baseline and follow up surveys

Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	ns	*	ns	ns	ns	*
15-19	18.9	49.6	15.7	59.8	40.5	70.9
20-24	19.8	53.0	15.9	67.2	41.7	63.4
25-29	16.7	53.5	11.4	67.0	35.9	56.6
30-34	15.1	48.6	14.3	57.1	30.1	47.8
35-49	8.8	32.0	8.0	62.3	31.5	34.1
Literacy	*	*	*	ns	*	*
Illiterate	13.0	33.1	10.3	60.5	30.9	51.2
Literate	20.7	63.3	22.0	71.7	47.3	69.4
Ethnicity	*	*	ns	ns	*	*
Brahmin/Chhetri	28.4	67.1	19.6	67.6	45.5	63.2
Tibeto-Burman	11.4	57.6	15.9	67.9	53.3	87.5
Tharu	15.5	38.1	8.6	74.2	32.2	55.9
Dalit	8.0	49.5	9.2	58.8	32.1	51.4
Muslim	9.5	22.9	10.7	58.6	ϕ	ϕ
Other terai origin	14.6	40.0	19.8	63.4	ϕ	ϕ
Other	16.9	55.9	ϕ	ϕ	ϕ	ϕ
Number of living children	*	*	*	ns	ns	*
<2 children	24.6	57.5	20.3	70.0	42.3	74.3
2-3 children	13.9	49.5	12.5	64.1	39.0	57.0
4 children or more	8.1	33.0	9.3	57.1	31.6	43.5
SES Index	*	*	*	*	*	*
Lowest	11.2	36.0	6.8	56.1	33.7	46.9
Second	12.8	33.3	11.0	55.9	28.4	51.9
Middle	12.3	48.0	12.0	63.6	33.1	58.2
Fourth	22.0	59.4	13.8	64.9	45.9	68.3
Highest	29.8	75.7	30.8	77.7	51.1	73.4
Place of delivery	*	*	*	*	*	*
At health facility	37.0	78.0	49.4	84.3	71.7	86.9
At home with a SBA	ϕ	61.8	ϕ	ϕ	55.2	82.9
At home without SBA	6.6	29.1	9.4	60.5	31.5	48.6
Total (%)	**17.4†**	**51.0†**	**13.8†**	**64.6†**	**38.4†**	**59.6†**
(n)	**889**	**892**	**827**	**831**	**896**	**891**

**Significant at <.05 level ns= Not significant*
ϕ indicates that a figure is based on fewer than 25 cases and are not shown
†Pre-post (Jhapa p= 0.000; Banke p=0.000; and Kanchanpur p=0.000)

Initiation of breastfeeding

Current recommendations call for breastfeeding immediately after birth. Awareness with regard to this recommendation shifted considerably from baseline both among RDW (Table 7.40) and among husbands and MIL (Table 7.41).

Table 7.40 Percent distribution of RDW mentioning appropriate timing of initiating the breast milk for the first time to the newborn in the baseline and follow up surveys

Knowledge regarding the appropriate timing of initiating breast milk	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Immediately after the birth	31.7	53.6	26.1	70.0	48.0	66.0
After the placenta is out	5.3	10.6	6.4	16.7	13.0	19.4
After bathing the new born	41.6	17.3	46.0	9.0	32.0	12.1
After 24 hours after birth	12.3	8.2	18.5	3.0	1.1	0.4
Other§	3.6	7.7	2.2	0.7	3.4	0.1
Do not know	5.6	2.7	1.0	0.6	2.4	1.9
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

§ Other includes: after one hour; within half an hour; after 2 hours; within one hour; after 3 days; within 24 hours; after 6 hours; within 3 hours;

Table 7.41 Percent distribution of husbands and MIL mentioning appropriate timing of initiating the breast milk for the first time to the newborn in the baseline and follow up surveys

Knowledge regarding appropriate timing of initiating breast milk	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Immediately after the birth	34.9	54.4	23.9	47.0	24.5	70.2	17.7	62.0	49.5	55.5	40.2	47.4
After the placenta is out	3.4	10.5	5.3	13.9	5.0	10.3	4.3	16.7	10.7	12.7	14.9	22.3
After bathing the new born	36.3	17.6	50.4	23.5	41.4	11.0	55.9	17.4	30.4	20.5	40.5	27.1
After 24 hours after birth	13.4	6.4	16.7	9.6	17.3	5.1	19.3	3.1	1.0	1.0	2.0	0.7
Other§	4.1	3.4	3.4	4.8	4.3	0.4	2.0	0.4	1.4	0.7	2.0	0.6
Do not know	7.9	7.8	0.4	1.2	7.6	2.9	0.8	0.4	6.9	9.6	0.3	1.7
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**

§ Other includes: after 1 hours; after cleaning the baby; 4 hours after birth; 5 hours after birth; after 3 days; after 5 days; after 3 hours; within 24 hours; after 12 hours; after 2 hours.

The observed improvement in knowledge about immediate breastfeeding reflected a marked increase in exposure to messages promoting this practice. As with other CB-MNC target behaviors, FCHVs were reported as the principal source of this message (Table 7.42).

Table 7.42 Percent distribution of RDW who have heard the message "a newborn should be breast fed within one hour after birth" including source of information about it in the baseline and follow up surveys

Heard the message	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Have heard the message	**43.4**	**71.8**	**42.9**	**92.5**	**56.8**	**80.2**
Sources (Multiple Response)						
From FCHV	7.9	47.0	15.0	79.5	32.9	58.8
From health worker	12.8	33.0	14.0	51.9	13.0	23.8
From friends	16.3	18.0	9.4	38.5	11.9	23.3
Radio	23.0	17.4	18.0	11.4	8.8	17.7
TV	12.3	11.9	3.8	3.6	3.3	5.7
Other§	2.1	12.9	2.5	4.6	2.7	4.3
Have not heard the message	56.6	28.2	57.1	7.5	43.2	19.8
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

§ Other includes: newspaper; magazine; mother-in-law; TBA; meetings; neighbors; poster; training; books; UNICEF; mothers group; adult literacy class; PLAN; UNESCO; school.

Exposure to the message "*A newborn should be breastfed within one hour after birth*" increased among husbands and MIL. FCHVs were an important source but husbands also reported radio and friends as important sources. MIL reported that, in addition to FCHVs, friends and other health workers were also important sources (Table 7.43).

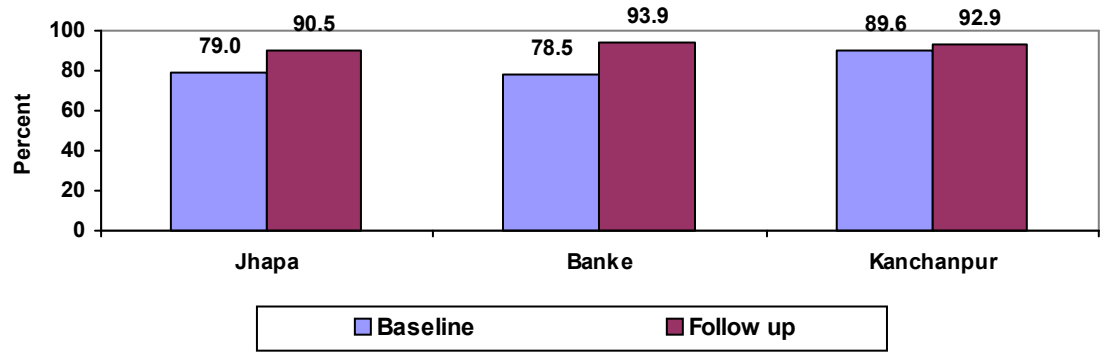
Table 7.43 Percent distribution of husbands and MIL who have heard the message "a newborn should be breast fed within one hour after birth" including sources of information in the baseline and follow up surveys

Heard the message	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Have heard the messages	**39.7**	**52.0**	**46.6**	**54.6**	**24.1**	**75.7**	**30.3**	**81.8**	**43.9**	**52.4**	**46.6**	**54.6**
Sources (Multiple Response)												
Radio	22.6	25.0	17.8	18.3	15.8	16.5	7.1	10.5	18.0	22.6	8.4	12.0
From FCHV	3.4	17.6	3.8	19.9	2.5	38.2	7.1	53.9	11.4	12.0	20.9	22.0
From health worker	10.6	17.2	11.7	18.7	5.0	28.3	7.1	20.9	7.6	10.6	6.4	10.7
TV	11.3	14.5	12.9	11.6	2.5	2.2	2.8	3.1	5.2	7.9	4.1	4.8
From friends	8.6	13.9	18.6	19.1	7.2	35.3	13.8	42.6	15.6	20.5	18.6	25.1
Other§	3.4	9.5	3.0	7.2	1.8	8.5	1.6	4.3	2.8	4.8	0.7	4.5
Have not heard the message	60.3	48.0	53.4	45.4	75.9	24.3	69.7	18.2	56.1	47.6	53.4	45.4
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**

§ Other includes: newspaper; magazine; mother-in-law; TBA; meetings; neighbors; poster; training; books; UNICEF; mothers group; adult literacy class; PLAN; UNESCO; school.

The proportion of RDW who provided colostrum to their newborn increased markedly from baseline (though less so in Kanchanpur, where this practice was already almost universal at baseline) (Figure 7.11).

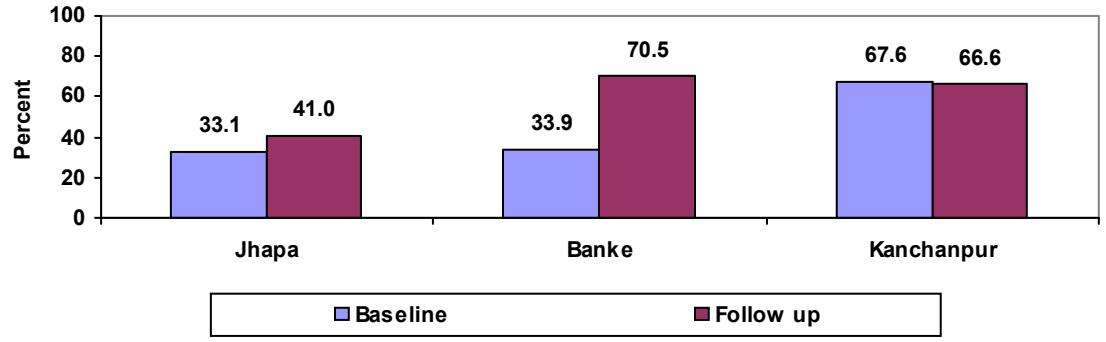
Figure 7.11 Percent of RDW who fed colostrum to their newborn in the baseline and follow up surveys



n= Jhapa (889 BS, 892 FS); Banke (827 BS, 831 FS); and Kanchanpur (896 BS, 891 FS)

The practice of initiating breastfeeding within one hour of birth also increased overall. The increase was particularly marked in Banke. There, as in Jhapa, this practice was reported by only about a third of RDW at baseline, but in Jhapa improvements on this indicator were modest. In Kanchanpur at both baseline and follow-up, this practice was reported by about 2/3's of RDW (Figure 7.12).

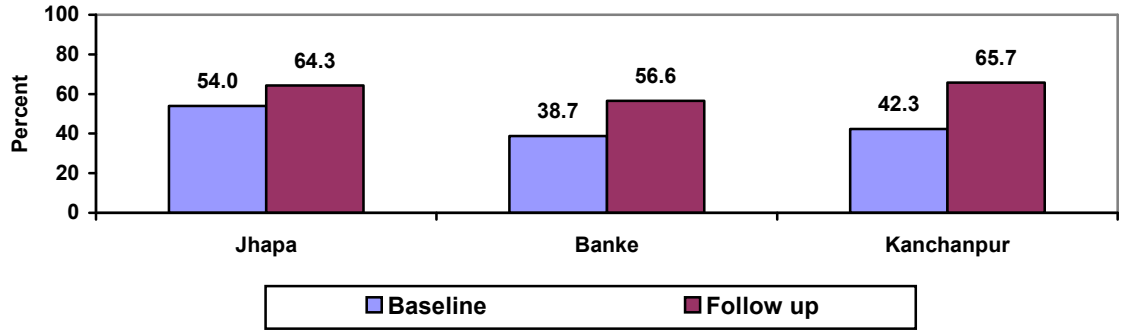
Figure 7.12 Percent distribution of RDW who breastfed their last child within one hour of birth in the baseline and follow up surveys



n= Jhapa (889 BS, 892 FS); Banke (827 BS, 831 FS); and Kanchanpur (896 BS, 891 FS)
† *Pre-post (Jhapa p= 0.145; Banke p=0.000; and Kanchanpur p=0.671)*

Figure 7.13 shows data on exclusive breastfeeding among children under six months of age at baseline and follow-up, which was defined in this case as having given nothing other than breast milk to the infant in the 24 hours prior to the survey. There was a marked increase in exclusive breastfeeding in all three districts.

Figure 7.13 Percent distribution of RDW who breastfed their infant below six months of age exclusively in the baseline and follow up surveys



n= Jhapa (433 BS, 406 FS); Banke (344 BS, 338 FS); and Kanchanpur (409 BS, 428 FS)
† *Pre-post (Jhapa p= 0.020; Banke p=0.228; and Kanchanpur p=0.000)*

As Table 7.44 shows, across all three districts there were improvements in exclusive breastfeeding through age 2-3 months (based on recall by RDW). However, only in Kanchanpur there were clear improvements extending to five months of age.

Table 7.44 Percent distribution of RDW who breastfed their infant exclusively at zero to five months by infant's age in the baseline and follow up surveys

Age of infant (in month)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
0	96.4	100.0	86.5	94.0	80.6	96.2
1	77.8	93.9	61.8	79.7	73.5	89.9
2	58.3	80.0	30.6	66.7	55.6	63.0
3	54.4	74.7	34.6	29.1	44.8	50.8
4	39.5	38.5	11.5	17.2	25.8	38.8
5	22.4	16.9	4.1	7.4	18.3	30.5
Total (%)	**54.0**	**64.3**	**38.7**	**56.6**	**42.3**	**65.7**
(n)	**433**	**406**	**344**	**338**	**409**	**428**

Experiencing breast problems

At follow-up, RDW from Kanchanpur (n=879) were asked if they had experienced any breast-related problems (excluding RDW whose infants had died). About 12% reported problems with breast engorgement, followed by 3% with cracked nipples and 2% with breast abscess (table not shown).

RDW (n=100) reporting breast engorgement were asked about how they managed the problem. The most frequently cited solutions were as follows (table not shown):

- Frequent sucking (57%)
- Express breast milk (46%)
- Visited health worker (16%)
- Hot compress (12%)
- Incision (1%)

Of the 30 RDW who had problems with cracked nipples, eight visited health workers, six applied medication after each feeding and five RDW applied their own breast milk after feeding. However, 43% (n=13) reported that they did nothing (table not shown). Only 18 out of 879 RDW in Kanchanpur reported feeding expressed breast milk. Materials used for feeding expressed milk included bowl by eight mothers, spoon by six mothers, pyaledor by three mothers and cup by one mother (table not shown).

7.6 Newborn care during first month

Knowledge about danger signs and symptoms among the new born

Table 7.45 shows RDW's knowledge of newborn danger signs requiring immediate health care. There was a marked increase between the two surveys in such knowledge. Almost all RDW in the follow up survey were able to mention at least one danger sign. The proportion of RDW able to mention at least three such symptoms increased in Jhapa from 26% to 51%, in Banke from 35% to 69% and in Kanchanpur from 17% to 54%.

Table 7.45 Percent distribution of RDW by knowledge of symptoms during first seven days of life indicating the need for immediate health care in the baseline and follow up surveys

Type of **s**ymptoms (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Fast or difficult breathing	49.1	71.6	73.8	69.6	42.6	68.8
Poor sucking or feeding	59.6	65.1	77.6	87.3	58.6	76.8
Feels cold or too hot	38.4	59.3	38.5	52.5	48.2	41.8
Pustules on skin 1 large or more than 10 small ones	18.0	27.4	3.1	28.7	10.3	31.0
Fever	22.7	21.1	29.4	24.2	9.6	53.2
Severe umbilical infection redness of skin around the cord/ foul smelling discharge or bleeding from the cord	8.7	13.1	17.4	46.7	6.8	20.8
Cough/pneumonia	7.0	6.0	10.1	12.0	4.8	5.2
Jaundice	6.7	6.3	3.5	5.0	0.9	1.2
Diarrhea/vomiting	6.4	11.0	7.1	3.1	12.0	5.2
Frequently crying	5.8	1.0	1.7	1.1	4.3	1.0
Not passing stool or urine/ urinary problem	3.7	3.4	1.5	1.0	3.0	1.8
Difficult to wake/lethargic/unconscious	2.7	12.2	6.5	21.7	3.6	14.3
Very small or low birth weight	NAP	3.1	NAP	7.1	-	9.1
Other§	4.6	2.9	9.1	1.6	3.9	1.0
Do not know	8.8	2.6	2.7	0.5	9.0	3.1
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

§ Other includes: stomach pain; chest indrawing; eye problem; reddish eye; eye infection; headache; rashes or infection in tongue; nasal discharge; reddish eye; TB; typhoid; not able to cry; dry nose and mouth; ear infection; swelling in body; weakness; TT.

Awareness of neonatal danger signs also improved among husbands and MIL (Table 7.46).

Table 7.46 Percent distribution of husbands and MIL by knowledge about the symptoms among the infant within seven days after delivery indicating the need to seek immediate health care in the baseline and follow up surveys

Type of symptoms (Multiple Response)	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Fast or difficult breathing	46.2	63.2	49.2	58.6	71.9	69.1	66.5	63.6	44.6	58.9	38.5	62.9
Poor sucking or feeding	59.9	62.2	67.4	62.2	64.4	82.0	80.7	80.2	52.9	77.4	54.1	79.0
Feels cold or too hot	31.2	50.0	36.0	48.2	29.9	46.7	35.4	43.8	37.0	34.9	42.9	35.7
Pustules on skin 1 large or more than 10 small ones	15.8	23.0	19.3	25.5	5.4	26.5	2.4	26.0	8.7	27.7	7.8	31.6
Severe umbilical infection redness of skin around the cord/ foul smelling discharge or bleeding from the cord	5.5	13.2	8.7	14.7	7.9	35.3	10.6	41.9	3.8	15.1	6.4	15.8
Fever	19.9	21.3	15.5	21.9	24.8	19.1	21.7	22.1	8.0	21.2	8.1	25.8
Difficult to wake/ lethargic/unconscious	3.1	9.1	7.6	11.2	7.6	19.1	7.1	25.2	3.1	13.0	3.7	12.7
Diarrhea/vomiting	6.2	8.8	8.0	10.0	2.5	2.2	3.1	4.3	7.6	3.8	8.8	2.1
Cough/pneumonia	8.2	7.8	8.7	7.2	6.1	15.1	7.1	14.0	4.8	5.5	2.4	3.8
Frequently crying	12.7	6.1	7.6	4.8	1.1	2.6	0.4	0.4	3.8	2.4	2.7	1.4
Jaundice	5.1	4.4	6.4	10.4	4.3	4.4	3.1	7.0	0.7	1.7	0.3	2.7
Not passing stool or urine/ urinary problem	3.1	4.1	3.4	3.6	0.7	1.5	0.8	-	1.7	1.4	1.4	1.7
Very small or low birth weight	NAP	3.4	NAP	1.2	NAP	6.3	NAP	7.4	NAP	8.9	NAP	8.6
Other§	3.8	1.4	0.4	4.0	10.0	1.1	7.9	0.8	2.0	1.4	2.3	1.3
Do not know	8.9	5.7	7.2	2.8	6.8	0.7	2.8	1.6	13.8	6.2	13.5	5.2
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**

§ Other includes: stomach pain; chest indrawing; eye problem; reddish eye; eye infection; headache; rashes or infection in tongue; nasal discharge; reddish eye; TB; typhoid; not able to cry; dry nose and mouth; ear infection; swelling in body; weakness; TT; measles,

Respondents were also asked where they could go or from whom they could seek care if their newborns experienced any of the above listed danger signs. The most frequently cited sources were hospital, PHCC, health post, subhealth post and private clinic or nursing homes, with all of them mentioned more frequently at follow-up than at baseline (Table 7.47).

Table 7.47 Percent distribution of RDW by knowledge about sources of health services for consultation if a child has danger signs in the baseline and follow up surveys

Knowledge about the sources for health services (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Hospital	25.2	51.0	50.4	88.2	31.7	75.4
Private clinic/ nursing home	34.4	48.7	30.2	33.8	11.9	30.4
PHCC	23.3	32.3	3.0	8.0	27.8	30.1
Sub-health post	23.1	29.2	38.1	47.7	26.2	30.4
Health post	17.4	18.2	22.5	31.7	35.6	37.9
Doctor	0.6	8.0	0.1	45.4	0.7	26.2
Nurse/ANM	1.2	5.6	0.5	32.4	2.1	30.9
HA/AHW	2.9	5.4	2.7	29.8	4.2	17.8
PHC ORC	0.7	2.8	2.5	14.4	2.6	5.6
MCHW	0.1	2.8	1.0	24.9	1.0	9.7
VHW	-	2.2	0.1	8.2	-	5.3
Medical shopkeeper/ experienced person	3.0	2.3	10.8	12.3	14.4	12.6
FCHV	0.2	1.3	0.5	30.1	3.0	24.7
Other§	0.5	0.6	0.4	6.1	0.5	2.2
Do not know	-	-	0.1	-	0.1	-
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

§ Other includes: TTBA; FPAN clinic; immunization center; traditional healer; Guruwa; Vaidya.

Similar results were found for husbands and MIL (table not shown).

Table 7.48 shows the cadre of health care providers consulted for newborn check-ups (within 3 days or between 4 days to 4 weeks). The patterns differed markedly between the districts.

Table 7.48 Percent distribution of RDW by persons consulted for the first time for the check up of their child within three days and between four days to four weeks following the birth, from follow up surveys

Persons who checked on the newborn's health (Multiple Response)	Jhapa		Banke		Kanchanpur	
	In first 3 days	In 4 days to 4 weeks	In first 3 days	In 4 days to 4 weeks	In first 3 days	In 4 days to 4 weeks
Doctor	31.3	1.4	12.0	2.8	13.9	0.2
Nurse/ANM	36.7	1.6	12.9	2.7	23.5	1.5
HA/AHW	7.0	1.9	10.0	4.1	6.3	1.3
MCHW	1.0	0.7	4.5	2.8	5.8	2.4
VHW	0.6	0.6	0.5	3.0	0.5	3.0
FCHV	9.7	2.8	23.5	12.0	42.4	11.6
TTBA	4.5	0.3	4.0	0.2	11.0	-
TBA	1.4	-	7.8	0.4	15.7	-
Other§	1.7	0.1	4.3	1.4	0.9	0.7
Do not remember	0.1	-	-	-	0.1	-
None	38.9	92.7	43.9	79.7	23.1	85.7
Total (n)	**886**	**886**	**823**	**823**	**880**	**880**

§ Other includes: CMA; medical shopkeeper; experienced health worker; friends, relatives

Among RDW whose infant lived at least two months, 47% of newborns in Jhapa, 26% in Banke and 31% in Kanchanpur received care *within one day* after delivery from a trained provider (i.e., doctor, nurse, ANM, HA, AHW, MCHW) while the corresponding figures at baseline were 40% in Jhapa, 19% in Banke and 16% in Kanchanpur.

The proportion of RDW reporting care for the newborn from a *trained provider* (i.e. not by an FCHV) within the first three days increased in the follow up survey in all districts - to nearly half (49%) of RDW in Jhapa, 27% in Banke and 32% in Kanchanpur in the follow-up survey (compared at baseline to 41% in Jhapa, 19% in Banke and 17% in Kanchanpur).

Overall, the proportion of RDW who took their child to a trained provider for a check-up within four weeks of birth increased in Jhapa - from 45% to 57%, in Banke - from 24% to 46% and in Kanchanpur – from 27% to 48% (table not shown).

Table 7.49 presents the proportions of newborns (alive at least 2 months) who received care within four weeks of birth from a trained provider by selected background characteristics. In general, there were gains across all socio-economic strata, though those of low wealth quintiles and members of disadvantaged caste-ethnic groups were still less likely to use such services at follow-up than were the less disadvantaged.

Table 7.49 Percent distribution of RDW whose infant received newborn care within four weeks of delivery from a trained health provider by selected background characteristics, among those who delivered 2-11 months prior to the survey in the baseline and follow up surveys

Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	ns	*	ns	ns	*	*
15-19	47.3	55.4	26.7	48.0	39.6	60.8
20-24	49.2	61.2	27.0	49.0	26.1	52.0
25-29	43.7	56.9	24.3	43.9	26.6	43.6
30-34	40.0	53.1	20.9	34.1	19.2	41.8
35-49	36.0	33.3	14.3	47.1	20.8	24.3
Literacy	*	*	*	*	*	*
Illiterate	30.4	38.4	19.6	40.6	19.7	41.4
Literate	56.2	69.6	35.3	54.4	35.5	56.7
Ethnicity	*	*	ns	*	*	*
Brahmin/Chhetri	66.2	75.2	34.9	61.5	31.8	58.1
Tibeto-Burman	43.8	56.4	27.8	33.3	38.1	58.1
Tharu	28.6	48.9	20.8	39.3	19.1	38.0
Dalit	30.3	51.2	22.2	41.7	25.2	38.2
Muslim	23.4	22.4	15.9	41.8	ϕ	ϕ
Other terai origin	40.7	45.9	23.5	41.0	ϕ	ϕ
Other	52.8	62.0	ϕ	ϕ	ϕ	ϕ
Number of living children	*	*	*	*	*	*
<2 children	62.0	70.5	35.5	53.8	39.9	64.8
2-3 children	37.2	49.3	21.2	40.1	20.5	42.2
4 children or more	23.0	33.7	17.9	43.9	23.0	38.9
SES Index	*	*	*	ns	*	*
Lowest	26.2	30.3	18.1	42.9	17.1	37.3
Second	31.6	39.3	17.5	38.5	15.9	34.1
Middle	39.1	54.5	22.7	47.6	28.7	47.2
Fourth	59.9	71.4	28.0	43.8	33.5	55.0
Highest	72.4	83.6	40.0	53.1	39.3	69.2
Place of delivery	*	*	*	*	*	*
At health facility	93.7	93.8	80.0	89.3	77.8	98.5
At home with a SBA	ϕ	82.1	ϕ	ϕ	68.5	95.6
At home without SBA	15.7	25.7	17.9	37.6	14.9	28.3
Total (%)	**45.4†**	**56.7†**	**24.3†**	**45.7†**	**26.9†**	**48.2†**
(n)	**757**	**766**	**684**	**714**	**806**	**713**

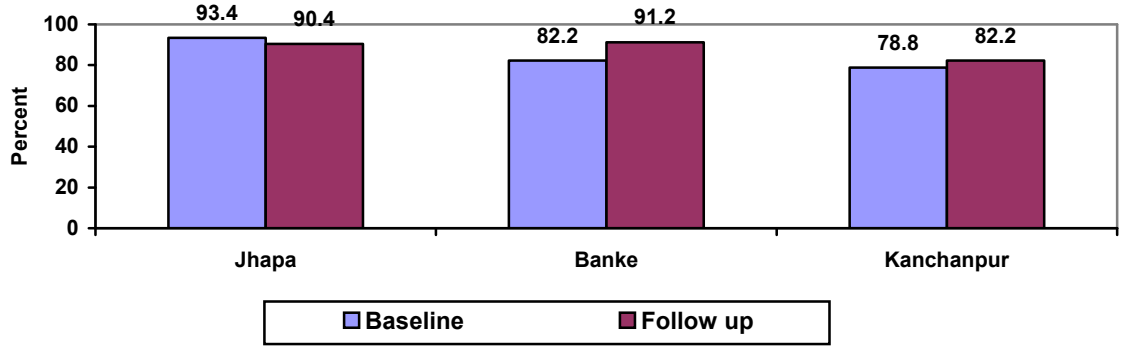
**Significant at <.05 level* *ns= Not significant*
ϕ indicates that a figure is based on fewer than 25 cases and are not shown
† Pre-post (Jhapa p= 0.040; Banke p=0.000; and Kanchanpur p=0.000)

Receiving Vitamin A Capsules

In order to protect children from vitamin A deficiency the Government of Nepal (GoN) has been distributing vitamin A capsules to children between 6-59 months twice yearly. In order to assess vitamin A coverage, all RDW whose infants were six months or more at the time of the last

National Vitamin A Day were asked if he or she received a vitamin A capsule distributed in last Baisakh (April – May). Coverage was high and remained at similar levels at follow-up as at baseline (Figure 7.14).

Figure 7.14 Percent distribution of children aged 6-11 months receiving vitamin A capsules during Baisakh distribution in the baseline and follow up surveys



n= Jhapa (272 BS; 333 FS); Banke (303 BS; 351 FS); Kanchanpur (396 BS; 156 FS)

Counseling on newborn issues

RDW whose newborns survived at least two months were asked about types of counseling received from the health worker, FCHV or TBA on newborn issues either prior to or following her delivery. The specific newborn topics were read out to the respondents who were asked if they were given such counseling. Across all topics there were marked increases in all three districts. The percentage of RDW who reported receiving counseling on at least two of the above newborn topics increased in Jhapa from 53% to 82%, in Banke from 50% to 87% and in Kanchanpur from 70% to 86% (Table 7.50).

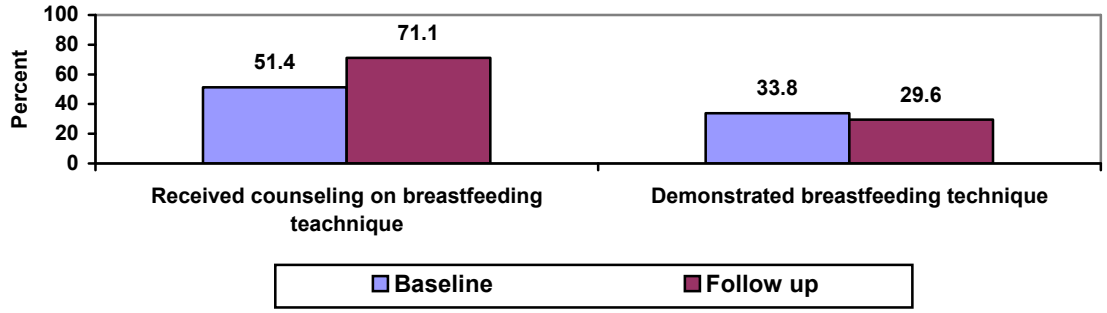
Table 7.50 Percent distribution of RDW receiving counseling on newborn issues from health worker, FCHV or TBA, among those who delivered 2-11 months prior to the survey in the baseline and follow up surveys

Whether a health worker, FCHV or TBA counsel at any time on the following newborn issues	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Keeping the baby warm	46.5	79.5	46.1	83.1	60.4	80.1
Breastfeeding	47.6	73.0	45.2	77.7	51.4	71.0
Newborn Danger signs (e.g. fast breathing, poor feeding, less weight, fever, cord infection, etc.)	39.2	73.2	42.7	78.9	55.3	67.2
Cord care	35.5	65.5	35.8	72.0	51.2	64.5
Special care of small baby	38.7	62.5	36.8	70.6	52.5	67.5
Immunization	54.0	82.2	60.2	83.8	74.3	86.5
At least two of the above	***53.1***	***82.2***	***50.4***	***87.1***	***69.6***	***86.4***
Total (n)	**757**	**766**	**684**	**714**	**806**	**713**

Those RDW in Kanchanpur who reported receiving counseling at any time on breastfeeding prior to or following their delivery (n=414 in BS and 506 in FS) were further asked whether the

FCHVs counseled and demonstrated on *breastfeeding technique* following their recent delivery. Over 71% of the RDW in the follow up survey (vs. 51% at baseline) reported having received such counseling (Figure 7.15).

Figure 7.15 Percent distribution of RDW in Kanchanpur who received counseling on breastfeeding technique and who were demonstrated on breastfeeding by FCHVs following the birth of their last child, among those who delivered 2-11 months prior to the survey and who received counseling on breastfeeding in the baseline and follow up surveys



n= 414 in BS and 506 in FS

RDW in Kanchanpur whose child had feeding problems (n=109) were asked in the follow-up survey if FCHVs provided advice to them on expressed breast milk. Only 11% (n=12) out of 109 RDW reported such counseling (table not shown).

Neonatal complications and treatment

RDW were asked about health problems their newborn experienced in the first four weeks following delivery. A list of complications that might occur to the neonates (14 in Jhapa and Banke and nine in Kanchanpur) were read out to respondents who in turn reported whether or not their newborns had experienced the complications. The pattern of reported symptoms was similar across districts and between baseline and follow-up, with fever as the most commonly reported symptom (Table 7.51).

Table 7.51 Percent distribution of RDW whose infant had experienced complications in the first four weeks following the delivery in the baseline and follow up surveys

Types of the health problems experienced by the newborn	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Fever	13.5	15.6	11.1	16.8	11.4	8.6
Feeding problem	7.0	7.2	6.7	6.2	8.4	4.3
Trouble breathing	8.4	10.3	7.1	7.2	NAP	NAP
Fast and difficult breathing	7.6	7.9	6.3	6.1	8.4	4.1
Chest-in-drawing	4.3	3.3	6.0	2.6	5.4	1.4
Drowsy	2.1	1.5	2.5	1.8	NAP	NAP
Abdominal tenderness	2.2	2.6	4.1	1.9	NAP	NAP
Convulsions	0.7	0.5	0.2	0.5	0.9	0.3
Persistent vomiting	4.3	3.2	4.4	3.9	NAP	NAP
Unconscious or drowsy	0.5	0.1	0.4	0.4	1.2	0.8
Red/discharging eye	2.6	1.8	2.4	1.3	NAP	NAP
Skin pustules	2.6	2.6	2.2	2.6	5.1	3.8
Skin around cord red	3.1	3.0	3.5	3.8	4.4	4.5
Felt cold	0.9	3.2	2.1	1.7	2.3	0.8
At least one of the above	***21.9***	***25.7***	***16.2***	***25.9***	***21.0***	***17.5***
Total (n)	**876**	**886**	**804**	**823**	**886**	**880**

Care-seeking in the event of such complications changed somewhat from baseline, with a larger proportion at follow-up reporting having sought care from hospital, health post or private clinic (Table 7.52). The percentage of RDW who sought care at a health facility for their infant for the management of danger signs during neonatal period increased in Jhapa from 48% to 64% but remained relatively unchanged in the other two districts.

Table 7.52 Percent distribution of RDW by person consulted or places visited for the treatment of complications occurred to their last child within four weeks after birth in the baseline and follow up surveys

Places visited or persons consulted for the problems of the newborn (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Private clinic/ nursing home	26.0	36.0	20.8	21.6	13.4	17.5
PHCC /HP/ SHP	19.3	20.6	21.5	22.5	28.0	29.2
Hospital	7.3	16.2	19.2	17.8	13.4	8.4
Consulted dhami / jhankri	12.5	14.9	6.9	8.5	5.9	5.8
Bought medicine from pharmacy	10.4	11.8	29.2	25.4	6.5	11.0
Traditional treatment at home	7.3	10.1	7.7	14.1	1.1	7.8
Consulted other HW	10.9	8.3	6.9	7.0	1.1	3.9
Consulted FCHV	1.0	5.3	4.6	21.6	9.1	13.6
Consulted relative/neighbor/friend	1.6	4.8	1.5	11.3	1.1	18.8
Given medicine at home	3.6	2.2	3.8	2.8	2.7	0.6
Consulted MCHW	0.5	-	1.5	6.1	1.6	-
Other§	1.0	2.2	4.6	10.4	19.4	18.8
Nothing	19.3	11.8	7.7	8.5	18.3	9.7
Total (n)	**192**	**228**	**130**	**213**	**186**	**154**

§Other includes: TBA; medical shop; gaon ghar clinic/ experienced person; person holding diploma in pharmacy from India.

RDW who reported seeking care during the illness of their newborn were further asked about the timing of seeking services. Overall, care was sought considerably more promptly at follow-up: in Jhapa at a mean of 1.6 days following onset of illness at follow-up vs. 2.1 days at baseline; in Banke 1.9 days vs. 2.8 days at baseline and, in Kanchanpur at 1.9 days vs. 3.1 days at baseline (Table 7.53).

Table 7.53 Percent distribution of RDW by time that they sought medical help when their child had complications within four weeks after birth and age of the child at that time in the baseline and follow up surveys

How long was your child sick before you sought medical help for the first time?	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
One day	47.1	52.3	30.0	46.1	33.5	41.8
Two days	27.7	26.9	30.8	25.6	25.7	28.8
Three days	15.5	11.4	12.5	18.5	16.4	18.0
Four or more days	8.4	8.5	20.0	9.7	22.4	10.8
Not taken for check-up	0.6	0.5	5.0	-	-	-
Do not know	0.6	0.5	1.7	-	2.0	0.7
Total (n)	**155**	**201**	**120**	**195**	**152**	**139**

The commonest reason given for seeking medical care was fever (Table 7.54). When asked what made them decide to seek medical help, the majority (about 70% in Jhapa and Banke; and 58% in Kanchanpur) said that their child was very ill followed by nearly one-fifth in Jhapa and Banke and one-third in Kanchanpur said that the child showed danger sign at that time (table not shown).

Table 7.54 Percent distribution of RDW who first sought medical help according to the health problems to their newborn in the baseline and follow up surveys

Description	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Type of health problem the newborn had at that time						
Fever	38.7	41.8	42.5	47.7	31.6	39.6
Fast breathing and difficult breathing	7.1	10.4	5.0	8.2	29.6	12.2
Trouble breathing	12.9	14.4	10.8	9.2		
Skin pustules	7.1	6.5	5.8	4.1	16.4	21.6
Skin around cord red	7.7	5.5	11.7	9.7	3.3	14.4
Abdominal tenderness	1.9	4.5	4.2	4.6		
Feeding problem	5.8	3.5	4.2	-	5.9	5.0
Chest-in-drawing	3.2	3.5	10.0	2.6	4.6	0.7
Persistent vomiting	7.7	2.5	0.8	5.6		
Red/discharging eye	1.9	2.0	3.3	0.5		
Felt cold	-	1.5	0.8	1.5	3.3	0.7
Drowsy or unconscious	1.9	0.5	-	0.5	0.7	0.7
Convulsions	0.6	-	-	-	0.7	-
Other (cold or cough/ pneumonia/ jaundice/infection)	3.2	3.5	0.8	5.6	3.9	5.0
Total (n)	**155**	**201**	**120**	**195**	**152**	**139**
First person consulted for health problem						
Doctor	22.6	31.3	22.5	12.8	15.8	11.5
AHW/CMA	32.9	23.9	21.7	19.5	15.1	26.6
Traditional healer	15.5	10.0	5.8	3.1	7.2	2.9
ANM	3.2	9.0	2.5	4.6	7.2	9.4
Medical shop	9.0	8.5	22.5	20.0	20.4	22.3
Nurse	3.9	-	-	-	1.3	2.2
Private practitioner	3.2	5.0	2.5	6.7	3.9	2.9
Family member	1.3	3.5	-	0.5	-	2.9
HA	1.3	2.0	1.7	3.6	15.8	2.9
MCHW	0.6	2.0	4.2	4.1	2.6	2.9
FCHV	0.6	3.0	5.0	20.0	6.6	10.8
VHW	0.6	-	0.8	0.5	1.3	1.4
Friend/neighbors	-	-	-	2.1	0.7	1.4
Other§	1.2	1.5	2.5	2.6	2.1	-
Not taken for check up/ given medicine at home	3.9	0.5	8.3	-	-	-
Total (n)	**155**	**201**	**120**	**195**	**152**	**139**

§ Other includes: trained or untrained TBA; person holding diploma in pharmacy from India; not taken to hospital as the child is just 3 days old; medical shopkeeper;

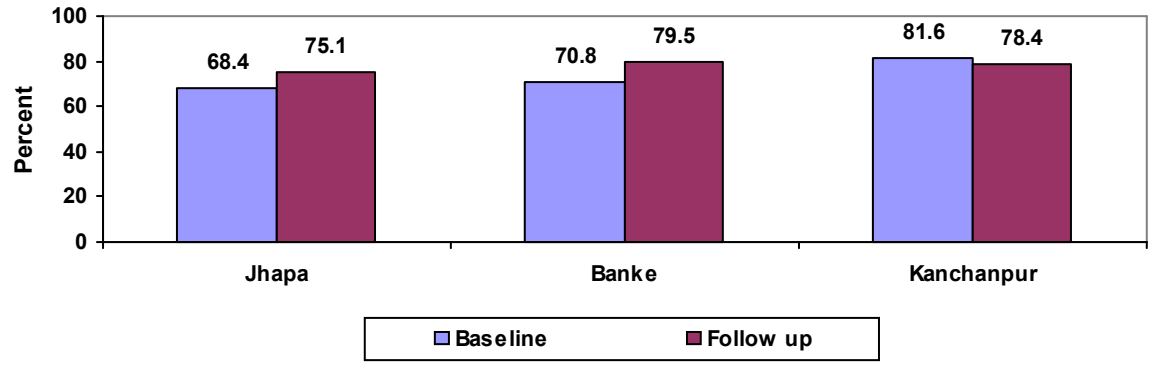
RDW were also asked to list *all* of the sources from which they obtained care for health problems experienced by their infant over the first four weeks of life. This gives a similar picture to that for providers of *first resort* (Table 7.55). The proportion of neonates taken at any time to trained health workers or health facility over the first four weeks of life increased from 79% to 85% in Jhapa and from 75% to 84% in Banke, while in Kanchanpur it remained at the same level (83%) in both surveys.

Table 7.55 Percent distribution of RDW places visited or persons consulted when their child had problems within four weeks following the birth in the baseline and follow up surveys

Places visited or persons consulted	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
AHW/CMA	35.5	36.3	30.8	36.4	17.1	43.9
Doctor	22.6	29.9	25.8	22.1	20.4	14.4
Traditional healer	31.6	29.4	23.3	28.2	21.1	10.8
Private practitioner	16.8	23.4	14.2	22.6	9.2	11.5
Medical shop	19.4	18.9	38.3	34.9	34.9	30.2
ANM	6.5	12.4	2.5	8.7	11.8	12.9
FCHV	1.9	7.0	10.8	27.2	13.8	19.4
Nurse	5.8	6.5	1.7	9.7	6.6	7.2
HA	2.6	5.0	3.3	13.3	16.4	5.8
MCHW	1.3	4.5	5.8	9.7	3.9	3.6
Trained TBA	1.3	2.5	1.7	0.5	2.0	-
VHW	1.3	2.0	1.7	3.6	2.0	2.2
Untrained TBA	0.6	0.5	1.7	1.0	3.3	0.7
Experienced health worker	-	2.5	1.7	2.6	2.6	-
Total (n)	**155**	**201**	**120**	**195**	**152**	**139**

RDW were asked if they sought care from a *health facility* when their newborn had problems within four weeks after the birth. Among RDW whose child had complications, over three quarters (75%-80%) reported that they sought services from health facilities. The percentage of RDW who sought care from health facilities increased in Jhapa and Banke but remained unchanged in Kanchanpur (Figure 7.16).

Figure 7.16 Percentage of RDW who sought care from a health facility when their child had problem within four weeks following the birth



n= Jhapa (155 BS; 201 FS); Banke (120 BS; 195 FS); and Kanchanpur (152 BS; 139 FS)

RDW who did not seek care from a health facility when their child had health problems (n=50 in Jhapa, 40 in Banke and 45 in Kanchanpur) were asked about the reasons. The majority (>82%) said that they did not feel it necessary. A few reported not seeking care because of financial problems or lack of access to reliable services (table not shown).

Size of newborn at birth and weight

The judgment of the RDW regarding the weight of their newborn was also sought in both baseline and follow-up surveys. Across all three districts there was a decline in perceived smaller-than-average birth size (Table 7.56).

Table 7.56 Percent distribution of RDW reporting the size of their child at birth in the baseline and follow up surveys

Size of the last child at birth	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Very large or larger than average	41.7	41.6	25.8	23.8	27.8	26.3
Average	37.3	41.4	47.8	59.2	41.0	54.3
Smaller than average or very small	20.8	16.9	26.1	17.0	31.2	19.1
Do not know	0.1	0.1	0.2	-	0.1	0.3
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

RDW with live births were also asked if their child was weighed at birth or at any time later. The percentage of children weighed any time after birth increased substantially in Jhapa and Kanchanpur however little change was observed in Banke (Table 7.57).

Table 7.57 Percent distribution of RDW whose child was weigh at birth or at any time after birth in the baseline and follow up surveys

Age of child when s/he was weigh	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Not weighed	57.3	47.1	68.6	66.9	58.9	14.1
Same day	27.4	41.5	4.0	12.0	10.0	35.9
Within 1-3 days	4.8	0.9	3.5	1.8	5.8	21.7
Within 4-42 days	5.2	4.8	11.7	13.5	16.0	24.9
After 43 or more days	5.2	5.7	12.2	5.7	9.2	3.4
Do not know	0.1	-	-	0.1	0.1	-
Total (n)	**889**	**892**	**827**	**831**	**896**	**891**

Opinions of RDW of Kanchanpur concerning health risks associated with low birth weight were also sought. On the question, "*do you think that newborn babies that are smaller than average are at greater danger of dying than newborn babies that are of average or larger than average size?",* at follow-up more than 70% of the RDW agreed, compared to 56% at baseline (Table 7.58).

Table 7.58 Percent distribution of RDW by their opinion regarding the health risks of babies who are smaller than average in the baseline and follow up surveys, Kanchanpur

Description	Baseline	Follow up
Opinion on whether newborn babies that are smaller than average are at greater danger of dying than newborn babies that are of average or larger than average size		
Yes	56.0	70.7
No	41.0	16.2
Do not know	3.0	13.1
Total (n)	**900**	**900**
Things that are most dangerous to the health of a newborn baby that is smaller than average (Multiple Response)		
Becomes sick easily	77.8	84.4
Does not eat properly	44.8	60.1
Can become cold easily	14.1	39.5
Weight loss/malnutrition	2.6	3.1
Other§	4.2	3.8
Do not know	1.8	0.5
Total (n)	**504**	**636**

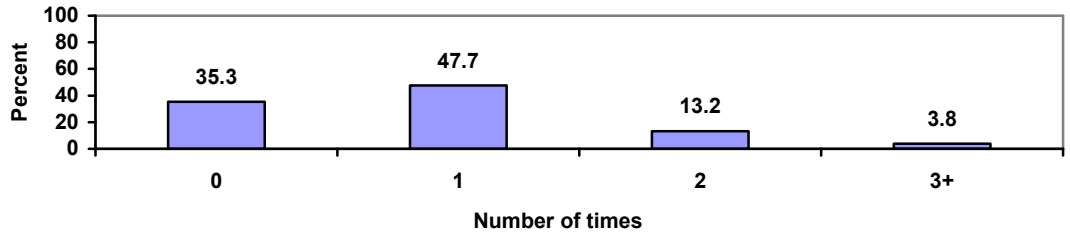
§ Other includes: fever; diarrhea; anemia; coough; acidity; worm; jaundice; vomiting; difficult to breath.

Weighing children by FCHVs

Information regarding weighing the newborn by FCHVs, and identification and treatment of low birth weight (LBW) children including referral by FCHVs was collected during the follow-up survey in Kanchanpur.

RDW were asked about the number of times FCHVs visited to weigh their newborn. About two-thirds (65%) reported that FCHVs visited at least once. Nearly half (48%) said that FCHVs visited only once, 13% said twice and another 4% said that they visited three times or more (Figure 7.17)

Figure 7.17 Percent distribution of RDW by number of times FCHVs visited to weigh their baby, among RDW with live birth and who or whose family members were not the FCHVs



n=887

RDW in Kanchanpur (excluding those with stillborns) (n=891) were asked if the FCHV weighed their baby at the first visit. More than six in 10 RDW reported that this had been done (Table

7.59). More than four-fifths of the children weighed by the FCHV during her first visit (83%; or n=464) were reported to be of normal weight (green) followed by 12% (or n= 66) with low birth weight (yellow) and 6% (or n=32) with very low birth weight (red).

Table 7.59 Percent distribution of RDW whose last child was weighed by FCHV during her first visit and result of the weighing, among RDW with live birth, Kanchanpur

Description	Percent
Whether FCHV weigh your baby in the first visit	
Yes	63.5
Total (n)	**891**
If the baby was weighed, what did the FCHV tell you about the baby's weight?	
Normal/green	82.6
Low birth weight/ yellow	11.7
Very low birth weight/red	5.7
Total (n)	**562**

Of the 66 children with LBW, 30% were referred to the LBW FCHVs, 55% were handled by their original FCHV (who provided LBW care), and 15% (or n=20) were neither followed by the original FCHV nor referred elsewhere. Of the 20 infants referred to LBW FCHVs, 12 were taken for consultation while the rest (n=8) were not taken to the LBW FCHVs (Table 7.60). Nearly two-thirds of the 32 very low birth weight babies (n=21) were reported to have been referred by the FCHVs to health facilities. Among these children (n=21), eight were reported to have been taken to a health facility for check ups while the remaining 13 were not.

Table 7.60 Percent distribution of RDW type of services or counseling provided by the FCHVs to normal or LBW children, Kanchanpur

Description	% Yes	Total (n)
FCHV made second visit (for children with normal/green weight)	29.7	464
FCHV referred to LBW FCHV (for children with low birth weight/yellow) §	30.3	66
Taken to the baby to the LBW FCHV	60.0	20
FCHV referred to health facility (for children with very low birth weight/red)	65.6	32
Taken the baby to health facility	38.1	21

§ ***55% of the RDW said that the FCHV herself was LBW FCHV.***

Keeping the newborn warm or Kangaroo method

Information on care for the newborn using Kangaroo Mother Care (KMC) was sought in Kanchanpur. RDW (n=886) were asked whether, within four weeks after birth, they or other family members ever put the baby directly on their skin and kept the baby there for some time to help keep the baby warm. Surprisingly, the proportion reporting such care actually dropped - from 30% at baseline to 12% at follow-up (table not shown). Similarly among newborns who RDW reported as low birth weight the proportion given skin-to-skin care dropped from 33% to 26%.

As discussed earlier, in Kanchanpur of the 562 children who were reported to have been weighed by an FCHV during her first visit, 98 were found to be LBW. RDW with LBW babies were asked about KMC-related counseling they received from their FCHVs. Nearly three-quarters (74%) reported that they were talked to by FCHVs about KMC following their last delivery and 50% also said that FCHVs brought KMC bag for a demonstration of KMC. Nearly half of these 98 RDW also reported that FCHVs helped them to use KMC. However, only half (n=49) of these 98 mothers reported that they actually ended up ever providing KMC to their babies (Table 7.61).

Table 7.61 Percent distribution of RDW with LBW babies receiving information and counseling from FCHV on KMC including its use in the follow up survey, Kanchanpur (n=98)

Description	Percent
Counseling by FCHVs about KMC following their last delivery	73.5
FCHV brought KMC materials bag for KMC demonstration	50.0
FCHV helped use KMC	49.0
RDW provided KMC to their babies	50.0

Of the 49 RDW who provided KMC, only 11 said that they provided KMC continuously for 24 hours; the rest (n=38) gave it intermittently, giving the following reasons (table not shown):

- Baby did not feel comfortable (53%)
- Uncomfortable (47%)
- Too warm (45%)
- No other person to support in household work (29%)
- Got sick (8%)

Of the 49 RDW who provided KMC, only about one-third (n=17) reported that other family members also helped **(**table not shown).

7.7 **Newborn mortality**

The fundamental goal of CB-MNC has been to reduce maternal and neonatal deaths. In both the baseline and follow-up surveys information on neonatal deaths were collected from RDW using the same survey questions and techniques.

Changes in the newborn mortality rate in each of the three program districts, as well as a pooled rate across the three districts, are presented below. Overall, there was reduction in neonatal deaths by 53% -- from 46 deaths in the baseline to 22 deaths in the endline surveys. Data presented in Table 7.62 shows that the estimated newborn mortality rate was 18/1000 in the baseline and 8/1000 in the follow up surveys across the three districts. The significance of changes in the newborn mortality rate in each of the three program districts, as well as a pooled rate across the three districts, was calculated using logistic regression. The odd ratios of 0.34 for the reduction in mortality in Banke, representing a reduction in mortality of 66%, is highly significant—both statistically as well as programmatically—as is the estimate of a 53% reduction in newborn mortality across the three districts. The mortality rate also decreased in Jhapa and Kanchanpur although the reduction was not statistically significant within the two districts. Unlike Banke, in both of those districts, baseline neonatal mortality was already quite low, less than half the national level neonatal mortality rate documented in NDHS 2006. Further analysis

indicated that the program has been successful in significantly reducing the neonatal mortality among all socio-economic groups, particularly in the middle three wealth quintiles.

Table 7.62 Newborn mortality rates at baseline and follow-up in three CB-MNC districts

Description	Jhapa		Banke		Kanchanpur		3 districts	
	BS	FS	BS	FS	BS	FS	BS	FS
Number of newborn deaths	13	6	23	8	10	8	46	22
Number of live births	889	892	827	831	896	891	2612	2614
Newborn mortality rate (number of deaths/1,000 live births)	15	7	28	10	11	9	18	8
Odds ratio for BS-FS difference	0.46		0.34		0.80		0.47	
p-value	0.16		0.000		0.70		0.004	

Chapter 8

Birth Preparedness, Access to Emergency Funds and Transportation

One important aspect of the antenatal counseling component of CB-MNC has been birth preparedness, including arrangement for money, transport, food items, clothes, identification of suitable blood donors, and ensuring that trained health workers are present at delivery. Such information was collected in both the baseline and follow up surveys. Likewise, information on availability in the study areas of financial support schemes for emergency delivery was also sought. Results for key CB-MNC Core Indicators are presented below.

CB-MNC Core Indicators for birth preparedness, access to emergency funds and transportation

Indicator	Jhapa		Banke		Kanchanpur	
	Base-line	Follow up	Base-line	Follow up	Base-line	Follow up
Mean value of birth preparedness index (BPI) among RDW who delivered 2-11 months prior to the survey, where the BPI for each respondent is calculated as the number of the following seven factors that the respondent reports:	51.6	60.4	45.1	56.0	44.0	57.1
1. … received pre-natal care at least one time by a trained provider during last pregnancy	73.7	88.7	77.8	91.6	80.6	88.2
2. … names prolonged labor as a danger sign during delivery	87.2	79.2	87.3	84.6	80.5	81.5
3. … names excessive bleeding as a danger sign during delivery	66.5	73.7	58.2	66.2	59.0	83.0
4. …family made financial preparations for emergencies.	47.6	65.0	57.4	68.6	37.3	66.8
5. … family made preparations for emergency transportation.	2.9	10.2	0.7	17.2	5.0	13.4
6. … birth was attended by SBA.	37.3	45.3	10.2	16.3	17.4	22.9
7. … received post-partum care within 6 weeks of delivery from a trained provider (excluding FCHVs).	45.9	60.7	24.5	47.6	28.1	44.1
Percentage of RDW who made at least two types of preparation from points 1-7	51.1	77.7	49.0	79.9	50.6	72.2
Percentage of RDW who set aside money for care during the delivery	34.6	84.4	33.6	81.2	24.3	82.6
Percentage of RDW who arranged for a skilled birth attendant to attend their last delivery	5.9	13.6	3.0	6.8	4.2	6.6
Percentage of RDW who arranged to deliver their last child in a health facility	15.2	26.9	6.0	14.6	10.6	16.8
Percentage of RDW who made preparations for emergencies: • Any type of preparation • At least two types of preparation from points 1-5	 48.7 10.4	 66.8 21.9	 60.0 4.4	 69.3 41.5	 38.3 10.4	 69.8 23.8
Percentage of RDW who can identify the location of a qualified health facility to go to in case emergency during delivery	88.2	84.9	69.8	86.6	65.8	78.8

8.1 Birth preparedness

Preparation for delivery

All RDW, husbands and MIL were asked if they had made specific preparations for their or their wives'/DIL's recent delivery. Data presented in Table 8.1 shows that the proportion reporting making such preparations increased substantially. The majority (78%-84%) of RDW reported making arrangements for money. The percentage of RDW who made two or more types of preparations during their last delivery increased from 50% (49%-51%) at baseline to about 75% (72%-79%) at follow-up across the three districts.

Table 8.1 Percent distribution of RDW reporting any types of the preparation made for the last delivery in the baseline and follow up surveys

Types of preparations made (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Financial	64.8	83.4	67.4	83.5	62.2	77.6
Food	48.4	73.7	49.3	72.1	48.3	68.8
Clothes for mother/ clothes for newborn/ clothes	6.7	7.4	2.1	1.9	1.2	3.1
Materials for clean delivery	5.1	5.7	6.3	16.3	8.3	17.0
Identification of facility	5.0	18.0	1.0	8.7	4.0	9.1
Transport	3.1	18.1	1.1	15.4	5.2	12.4
Identification of birth attendant	2.9	7.1	3.3	21.7	3.2	10.4
Blood	0.4	2.3	-	0.8	-	0.8
Materials for body massage	-	0.1	0.1	-	0.1	-
No preparation	32.1	12.7	27.9	13.6	32.0	16.9
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

At follow-up about nine in every 10 husbands and about eight in every 10 MIL reported that they had made preparations for their wife's/DIL's recent delivery; these figures are higher by 7 to 15 percent than baseline (Table 8.2).

Table 8.2 Percent distribution of husbands and MIL reporting any types of the preparation made for the last delivery in the baseline and follow up surveys

Types of preparations made (Multiple Response)	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Financial	77.1	91.9	63.6	76.1	77.7	87.9	59.4	77.5	69.6	88.0	54.1	71.8
Food	46.9	62.8	59.8	76.9	56.1	61.8	57.5	67.4	47.1	67.8	56.4	69.4
Transport	8.6	24.7	3.4	16.7	2.9	25.0	2.4	13.2	9.7	20.2	2.4	11.3
Identification of facility	6.8	19.3	3.0	9.2	2.2	11.4	0.4	7.4	4.2	12.0	2.0	5.2
Identification of birth attendant	4.5	11.8	3.8	5.2	3.2	23.5	4.3	15.9	4.8	12.0	2.4	11.7
Materials for clean delivery	4.5	4.1	6.1	5.6	5.4	12.9	2.8	10.5	8.7	14.0	8.1	14.4
Blood	1.4	3.0	-	1.6	-	2.2	-	0.8	-	0.7	-	0.7
Clothes for mother/ clothes for newborn	2.1	2.4	4.9	5.2	1.4	1.5	1.2	1.9	0.3	0.3	0.0	1.4
Other§	-	1.0	-	-	-	-	-	-	-	-	-	-
No preparation	21.9	7.4	27.7	13.1	18.7	9.9	26.0	19.4	24.6	10.3	32.8	22.3
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**

§ Other includes: arrangement of person for massaging mother and newborn.

Differentials on preparation by selected background characteristics are presented in Table 8.3. In all three districts there were significant improvements from baseline across all strata, although socio-economic differentials continued to be evident even at follow-up.

Table 8.3 Percent distribution of RDW who made any preparations during their last pregnancy for their delivery by selected background characteristics in the baseline and follow up surveys

Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	*	*	ns	ns	ns	ns
15-19	70.1	82.1	72.3	85.6	72.4	76.7
20-24	68.7	90.4	74.4	86.3	68.1	86.2
25-29	73.3	89.3	73.3	87.5	70.0	82.9
30-34	57.3	88.6	71.7	84.9	62.7	84.4
35-49	54.4	65.4	60.0	87.1	57.4	73.3
Literacy	*	*	*	ns	*	*
Illiterate	55.2	81.5	66.8	83.9	61.4	78.3
Literate	77.4	91.4	85.0	90.7	75.9	88.8
Ethnicity	*	*	ns	*	*	*
Brahmin/Chhetri	78.8	91.9	81.1	94.2	73.9	89.3
Tibeto-Burman	76.4	90.0	84.1	81.5	75.6	95.1
Tharu	59.1	90.7	65.1	70.8	58.7	74.9
Dalit	65.8	87.8	69.4	85.1	69.9	80.6
Muslim	40.0	72.3	68.1	87.4	ϕ	ϕ
Other terai origin	61.0	77.9	73.5	93.5	ϕ	ϕ
Other	66.1	86.7	ϕ	ϕ	ϕ	ϕ
Number of living children	*	*	ns	ns	ns	ns
<2 children	73.0	90.6	72.6	87.5	68.8	85.7
2-3 children	68.6	88.0	74.5	85.6	68.9	82.0
4 children or more	50.8	72.9	67.4	86.4	64.8	81.9
SES Index	*	*	*	*	*	*
Lowest	49.0	79.0	63.8	76.2	55.8	74.7
Second	63.5	84.6	65.9	86.6	66.2	82.5
Middle	70.3	86.9	74.9	84.9	69.6	87.5
Fourth	77.7	90.8	80.4	86.6	70.1	84.4
Highest	82.1	94.3	79.5	93.6	77.1	87.2
Total (%)	**67.9†**	**87.3†**	**72.1†**	**86.4†**	**68.0†**	**83.1†**
(n)	**900**	**900**	**840**	**840**	**900**	**900**

**Significant at <.05 level* *ns= Not significant*
ϕ indicates that a figure is based on fewer than 25 cases and are not shown
†Pre-post (Jhapa p= 0.000; Banke p=0.000; and Kanchanpur p=0.000)

In the follow up survey, all three categories of respondents were asked if they were given specific information by FCHVs about the persons they should contact for emergency transportation. Overall, about half of RDW reported having received such information. RDW, husbands and MIL who reported *not receiving* such information were asked about how useful it would be to receive such information from FCHVs. The majority (46%-99%) considered it to be somewhat or very useful (Table 8.4). RDW (608 each in Jhapa and Banke; and 643 in Kanchanpur) whose MIL was still alive were further asked how supportive their MIL was in arranging that an SBA be present for the delivery. About three-quarters of such respondents reported that their MIL was somewhat or very supportive (table not shown).

Table 8.4 Percent distribution of RDW, husbands and MIL who received specific information about who to contact to arrange for emergency transportation in the follow up survey

Description	Jhapa			Banke			Kanchanpur		
	RDW	Husband	MIL	RDW	Husband	MIL	RDW	Husband	MIL
Whether FCHV provided specific information about who to contact to arrange for emergency transportation									
Yes	45.3	30.7	21.1	56.8	36.4	39.9	43.1	21.0	18.6
Self or family member FCHV	-	-	-	0.2	-	-	-	-	-
Total (n)	**900**	**296**	**251**	**840**	**272**	**258**	**900**	**262**	**226**
If no, how useful would it have been to receive more specific information?									
Very useful	80.7	84.9	78.8	80.1	80.9	75.5	74.0	75.4	62.5
Somewhat useful	18.3	14.1	19.7	18.8	17.9	23.2	22.5	20.3	35.9
Not useful	1.0	1.0	1.5	1.1	1.2	1.3	3.5	4.3	1.6
Total (n)	**492**	**205**	**198**	**361**	**173**	**155**	**512**	**207**	**184**

In the follow up survey, all three categories of respondents in Jhapa and Banke were asked the sources from which they learned that they should make preparations for their or their wife/DIL's delivery. Over 60% of RDW in Jhapa and 76% in Banke mentioned FCHVs; 63% in Jhapa and 67% in Banke reported the BPP key chain as an information source (Table 8.5).

Table 8.5 Percent distribution of RDW, husbands and MIL by source of information about the need for making preparations for their or their wife/DIL's delivery in the follow up survey

Sources of information	Jhapa			Banke		
	RDW	Husband	MIL	RDW	Husband	MIL
From BPP Key Chain	63.2	41.9	16.7	67.1	51.1	37.2
From FCHV	60.6	26.7	26.7	76.9	39.7	50.0
Family/neighbors/friends	60.3	61.1	61.8	67.4	67.3	63.6
From Radio	57.2	61.8	43.0	56.9	61.8	31.8
From health worker	50.0	36.5	14.7	55.4	32.7	24.0
From TV	46.2	49.3	36.7	17.0	18.0	9.3
Wall painting	20.0	25.0	5.6	14.5	22.4	2.3
Discussions in MG Meetings	7.4	1.0	4.8	17.6	1.1	9.3
Street theatre	3.3	7.4	0.8	4.4	9.6	3.5
Other§	2.6	5.7	4.8	0.7	5.1	6.2
Total (n)	**900**	**296**	**251**	**840**	**272**	**258**

§ Other includes: book; magazine; newspaper; study; TBA; flip chart; experienced person.

Financial Preparations

During both baseline and follow-up surveys, RDW were asked if they had set aside any money for delivery care. This practice increased sharply. Over 80% of the RDW in all three districts said that they had made such arrangements, vs. only a quarter to a third at baseline. RDW who responded affirmatively were asked how much they set aside. Among those who had saved money, the average amount set aside was much higher at follow-up than at baseline (Table 8.6).

Table 8.6 Percent distribution of RDW who or whose family members arranged money for care during the delivery in the baseline and follow up surveys

Amount of money set aside specifically for care during the delivery (in Rs)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
<1000	5.0	5.4	5.8	13.1	5.2	9.1
1000-2000	12.8	19.0	9.8	26.4	8.8	32.9
2001-3000	4.9	12.7	2.9	9.2	2.1	10.8
3001-4000	2.0	7.3	0.7	5.4	1.3	5.0
4001+	8.6	34.7	3.6	18.6	2.2	15.3
Mean	**3107**	**4672**	**2275**	**3035**	**2110**	**2739**
SD	**2839**	**3744**	**2331**	**2650**	**2078**	**2135**
Do not know	1.3	5.3	10.8	8.6	4.7	9.4
None	65.4	15.6	66.4	18.8	75.7	17.4
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

Arrangement of trained health workers or health provider for delivery

Although there was a significant shift across all districts in making arrangements to have someone to help at the time of delivery, the proportion reporting having made arrangements for a *skilled birth attendant* (i.e. a doctor, staff nurse or ANM) remained relatively low.

Table 8.7 Percent distribution of RDW who had arranged ahead of time for someone to attend their last delivery in the baseline and follow up surveys

Persons arranged ahead of time to attend the delivery (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Doctor	3.7	9.4	2.3	5.4	2.6	2.6
Staff nurse	2.3	4.9	1.9	4.2	2.1	3.0
ANM	2.0	4.0	0.5	1.5	1.3	4.1
MCHW	0.6	1.4	2.7	5.5	0.3	1.6
HA	0.1	0.2	-	1.0	0.1	-
AHW/CMA	2.3	3.2	1.0	3.8	0.8	0.8
VHW	0.2	0.1	0.2	-	-	0.2
Trained TBA	1.7	4.7	3.9	6.2	6.0	5.8
Untrained TBA	1.1	3.0	4.5	8.6	7.4	6.2
FCHV	1.7	4.8	2.6	13.0	4.0	7.6
Relative/friend	5.1	25.8	7.1	26.1	11.1	22.0
Medical shopkeeper	0.4	0.2	0.1	0.7	0.3	0.2
Other (sister-in-law/ mother)	0.1	1.7	0.2	1.4	-	-
No one	84.0	57.9	80.6	57.9	75.9	64.9
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

RDW were also asked if they arranged a *place* for the delivery. This practice increased sharply in all three districts between the baseline and follow up surveys (Table 8.8). The proportion having made such arrangements increased in Jhapa from 15 to 27%, in Banke from 6 to 15%, and in Kanchanpur from 11 to 17%.

Table 8.8 Percent distribution of RDW by prior arrangement of place to deliver their last child in the baseline and follow up surveys

Places arranged for the delivery of the last child	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
At home	19.4	28.9	44.2	61.1	28.7	49.9
Hospital	8.8	13.9	3.5	11.9	7.4	9.2
Private clinic / nursing home	5.0	8.8	1.5	1.5	0.3	0.8
Primary health care center	1.0	3.6	-	0.1	1.8	4.3
Health post	0.2	0.3	0.2	1.1	0.9	1.8
NGO clinic	-	0.3	-	-	-	-
Sub-health post	0.2	-	0.7	-	0.1	0.7
Other (medical shop/ parents home)	0.2	0.3	0.5	0.4	0.2	0.2
None	65.1	43.9	49.4	23.9	60.6	33.1
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

Table 8.9 shows differentials in arrangements for health facility delivery by background characteristics. Although there were marked increases across all strata, significant socio-economic differentials remained at follow-up.

Table 8.9 Percent distribution of RDW who arranged to deliver their last child in a health facility by their selected background characteristics in the baseline and follow up surveys

Background characteristics	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Age of RDW (in years)	ns	*	*	*	ns	*
15-19	13.1	22.2	8.5	16.9	11.2	22.5
20-24	16.9	30.1	8.9	19.8	12.3	18.4
25-29	14.5	28.8	3.7	13.8	10.7	13.9
30-34	15.6	24.8	2.7	3.2	4.8	13.3
35-49	11.8	9.6	1.3	1.6	3.7	8.9
Literacy	*	*	*	*	*	*
Illiterate	5.7	9.0	3.4	5.9	4.3	9.6
Literate	22.4	39.2	12.1	29.6	18.0	25.2
Ethnicity	*	*	*	*	*	*
Brahmin/Chhetri	30.4	47.3	15.0	33.5	18.3	23.1
Tibeto-Burman	17.9	32.5	-	14.8	13.3	14.6
Tharu	7.4	13.0	1.7	15.4	3.0	9.7
Dalit	9.6	16.3	3.3	8.8	6.0	15.1
Muslim	1.5	3.6	2.9	4.5	100.0	ϕ
Other terai origin	1.0	12.6	7.1	5.4	14.3	ϕ
Other	8.5	28.3	ϕ	ϕ	-	ϕ
Number of living children	*	*	*	*	*	*
<2 children	20.0	36.3	11.1	22.8	17.0	26.5
2-3 children	15.3	22.8	5.7	14.1	7.7	12.8
4 children or more	0.8	7.5	0.9	2.3	7.7	11.3
SES Index	*	*	*	*	*	*
Lowest	2.5	9.3	2.9	6.3	4.3	12.1
Second	7.7	9.1	2.4	6.4	4.9	6.9
Middle	13.3	21.7	5.3	16.9	7.0	16.8
Fourth	19.6	37.0	6.7	15.7	17.8	17.2
Highest	35.7	54.2	15.2	24.0	18.6	30.8
Total (%)	**15.2†**	**26.9†**	**6.0†**	**14.6†**	**10.6†**	**16.8†**
(n)	**900**	**900**	**840**	**840**	**900**	**900**

**Significant at <.05 level* *ns= Not significant*
ϕ indicates that a figure is based on fewer than 25 cases and are not shown
†Pre-post (Jhapa p= 0.001; Banke p=0.002; and Kanchanpur p=0.041)

Preparation for the post-delivery period

RDW were asked about preparations for care of the mother and newborn over the first month after delivery. There were increases across all categories of preparation, but particularly financial (Table 8.10).

Table 8.10 Percent distribution of RDW who made any preparation for care of the mother and newborn during the first month following the delivery in the baseline and follow up surveys

Type of preparations made (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Financial	20.7	45.4	27.0	47.7	23.4	56.7
Food/ oil/ ghee	2.7	20.4	8.2	1.2	6.1	8.9
Identification of facility	1.4	9.6	1.8	12.5	1.9	4.0
Identification of health worker	1.2	3.4	2.1	9.3	1.8	4.7
Blood	0.1	0.7	-	0.4	0.1	0.7
Other§	1.2	5.2	0.4	1.8	0.8	0.9
None	76.6	50.8	71.4	51.8	75.3	41.8
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

§ Other includes: clothes; TBA; mother was requested to stay with us for care; maid.

Preparation for emergency during pregnancy, delivery or postpartum

Respondents were asked if they had made any preparations for *emergencies* during their own or their wife's/DIL's last pregnancy, delivery or after delivery. There were marked increases in *financial* preparations for emergencies across all districts. Other categories of preparation also saw improvements but were less commonly reported (Table 8.11).

Table 8.11 Percent distribution of RDW by types of preparations for emergencies during their or their wife/DIL's last pregnancy, delivery or after delivery in the baseline and follow up surveys

Types of preparations made (Multiple Response)	Jhapa		Banke		Kanchanpur	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
Financial	47.6	65.1	58.0	68.9	36.1	66.6
Food/ oil/ ghee	0.2	15.9	7.5	0.8	1.7	2.8
Identification of facility	6.1	15.6	2.0	30.1	7.9	16.7
Transport	2.7	10.4	0.8	17.5	4.7	12.4
Identification of health worker	4.8	4.6	2.6	14.2	3.2	8.3
Blood	0.3	1.6	0.2	0.8	0.1	1.0
Clothes for mother and newborn	0.1	0.4	0.1	0.1	0.4	0.6
Other (friends, TBA)	0.4	0.6	-	0.5	-	-
Nothing	51.3	33.2	40.0	30.7	61.7	30.2
Total (n)	**900**	**900**	**840**	**840**	**900**	**900**

More than three-quarters (78%-85%) of husbands and about two-thirds (65%-69%) of MIL in the follow up survey reported having made preparations for emergencies during their wife/DIL's pregnancy, delivery or after delivery, up significantly from baseline (Table 8.12).

Table 8.12 Percent distribution of husbands and MIL by types of preparations for emergencies during their wife/DIL's pregnancy, delivery or after delivery in the baseline and follow up surveys

Types of preparations Made (Multiple Response)	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Financial	64.4	77.0	58.3	61.8	69.1	77.9	57.9	64.7	55.0	83.9	40.2	67.7
Transport	5.5	23.0	2.3	14.7	2.2	27.6	1.6	17.8	9.7	26.7	3.0	12.4
Identification of facility	7.9	19.3	6.4	12.7	2.9	26.8	0.8	24.0	4.5	19.5	3.0	11.3
Identification of health worker	6.2	9.1	7.6	5.2	4.0	15.4	3.9	9.7	7.6	10.3	3.0	9.6
Food/ oil/ ghee	-	7.1	1.1	12.7	6.1	0.4	9.8	1.2	1.4	2.4	0.7	3.4
Blood	0.3	2.4	-	0.4	0.4	2.6	-	-	-	1.0	-	0.3
Other§	-	0.7	-	2.0	-	0.4	-	-	0.3	-	0.0	1.0
Nothing	34.6	22.0	40.9	34.7	29.1	20.6	39.0	33.7	42.9	15.1	58.4	30.6
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**

§ Other includes: clothes for mother and newborn; clean delivery kits.

Decision-making

Questions were also asked on the decision-making roles related to emergency care. The majority of respondents stated that husbands and MIL are involved in decision-making regarding financial and transportation issues (Table 8.13).

Table 8.13 Percent distribution of husbands and MIL reporting the main decision makers in the family with respect to the emergency care (financial and transportation issues) during their wives/DIL pregnancy or delivery in the baseline and follow up surveys

Description	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Persons involved in making the decision (Multiple Response)												
Wife / DIL	31.8	35.5	20.5	23.9	15.8	47.4	7.9	32.9	29.1	41.8	23.0	28.9
Her husband	89.4	76.7	61.7	71.7	90.6	69.1	80.3	83.3	83.7	83.6	67.2	70.8
Her mother-in-law	23.3	34.1	76.1	55.0	26.3	29.0	65.0	42.6	43.3	36.0	72.0	59.8
Her father-in-law	24.7	25.0	54.2	46.2	25.9	25.0	55.1	39.5	35.3	29.1	52.0	51.9
Family members§	7.9	7.8	4.5	2.4	3.6	1.1	0.8	1.6	8.3	2.4	3.0	1.7
Other (neighbors)	1.0	1.4	-	1.6	0.4	1.5	-	0.4	0.7	-	-	-
Do not know because she was in her parents home	-	-	-	0.4	0.4	-	0.4	-	0.3	0.3	-	0.3
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**
Person most responsible for making the final decision												
Wife / DIL	1.7	8.8	3.4	6.0	0.7	9.2	1.2	1.9	2.4	6.8	1.0	4.8
Her husband	77.4	76.0	34.5	44.6	78.4	72.8	51.2	65.5	67.5	69.2	41.9	45.4
Her mother-in-law	6.5	6.1	29.9	24.7	8.3	7.0	25.2	14.3	9.3	8.2	26.0	25.8
Her father-in-law	12.7	7.8	31.4	23.1	11.5	10.7	21.3	17.4	18.3	15.1	30.4	22.7
Family members§	1.4	1.4	0.8	0.8	1.1	0.4	0.8	0.8	2.1	0.3	0.7	0.7
Other (neighbors)	0.3	-	-	0.4	-	-	-	-	-	-	-	-
Do not know because she was in her parents home	-	-	-	0.4	-	-	0.4	-	0.3	0.3	-	0.7
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**

§ Other family member includes: sister; brother; sister-in-law; father-in-law; mother-in-law; uncle.

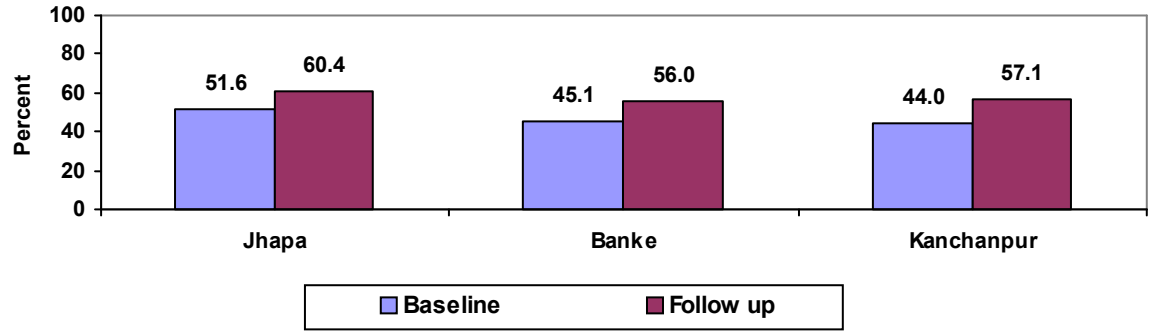
The Birth Preparedness Index (BPI)

The BPI is an index constructed from seven indicators measuring various aspects of the birth preparedness process. It is calculated, at the level of the individual RDW (among those who delivered 2-11 months prior to the survey), as the percentage of the following seven components that a RDW reports:

1) received antenatal care at least one time by a trained provider during last pregnancy;
2) names prolonged labor as a danger sign during delivery;
3) names excessive bleeding as a danger sign during delivery;
4) made financial preparations for emergencies during last pregnancy;
5) made preparations for emergency transportation during last pregnancy;
6) last birth was attended by skilled provider (defined as physician, nurse, ANM, or MCHW); and
7) received post-partum care within six weeks of delivery from a trained provider following most recent delivery.

By this measure, improvements were evident across all three districts.

Figure 8.1 Mean value of birth preparedness index in three districts in the baseline and follow up surveys



n= Jhapa (765 BS, 771 FS); Banke (706 BS, 722 FS); Kanchanpur (815 BS, 719 FS)

8.2 Access to emergency funds and transportation

This section deals with sources of lending in the community and borrowing status. Husbands and MIL were asked if there are individuals or groups in their areas that lend money to women in order to meet emergency needs related to pregnancy or delivery. The majority (>75%) of the husbands and MIL during both survey periods were aware of *individuals* in their community who lend in such circumstances. Interestingly, the proportion reporting being aware of specific *groups* making such loans increased across all three districts (note that CB-MNC program inputs did not include any special arrangement to improve access to such funds). It is also interesting to note that reported recourse to such credit sources *declined* from baseline to follow-up (Table 8.14).

Table 8.14 Percent distribution of husbands and MIL of the RDW reporting the existence of individuals and groups in their areas that loan money to women who need it for an emergency during pregnancy or delivery in the baseline and follow up surveys

Description	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
% reporting existence of any individuals that loan money	92.1	87.2	89.4	84.5	73.0	85.3	75.6	74.8	82.7	84.9	76.4	77.3
% reporting existence of any groups that loan money	32.2	69.3	34.5	59.4	47.5	65.4	47.6	60.1	70.9	75.0	63.9	73.2
% who borrowed money from any of these groups or individuals	26.7	14.9	32.2	15.9	19.8	11.4	15.7	9.3	13.5	16.1	18.2	10.7
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**

Husbands and MIL were also asked to mention the specific groups in their areas who could lend money. Local credit and savings schemes were the most important reported source across all three districts and were cited much more frequently at follow-up (Table 8.15).

Table 8.15 Percent distribution of husbands and MIL of the RDW by knowledge about types of groups of their areas that loan money to women who need it for an emergency during pregnancy or delivery in the baseline and follow up surveys

Kinds of groups (Multiple Response)	Jhapa				Banke				Kanchanpur			
	Husband		MIL		Husband		MIL		Husband		MIL	
	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS	BS	FS
Mothers group	2.7	14.9	3.4	15.5	4.0	5.9	4.3	5.0	40.1	32.5	43.2	32.0
Saving and credit scheme	14.4	53.7	17.0	43.0	17.6	43.0	19.3	41.5	32.5	48.3	25.0	49.8
Bank	1.0	3.4	1.9	0.8	2.9	10.3	2.0	5.8	0.7	1.4	1.0	1.7
Local non-governmental organization	8.9	9.5	9.1	3.6	16.5	5.5	15.0	3.9	2.8	4.1	2.0	0.3
Other§	6.5	5.4	6.4	3.6	10.4	12.5	10.2	9.7	14.2	8.2	2.7	6.2
Do not know the name	-	-	-	-	0.7	-	0.8	0.4	-	-	-	-
None	67.8	30.7	65.5	40.6	52.5	34.6	52.4	39.9	29.1	25.0	36.1	26.8
Total (n)	**292**	**296**	**264**	**251**	**278**	**272**	**254**	**258**	**289**	**292**	**296**	**291**

§ Other includes: women related groups, poverty alleviation group; youth group; agriculture related groups and other groups.

Chapter 9

Exposure to BCC Tools

BCC channels or tools used under CB-MNC included radio drama serial, street theatre, wall paintings, and the BPP key chain. This survey assessed exposure to these media and information received.

9.1 Exposure to radio health programs

In Banke and Jhapa, RDW and their husbands and MIL were asked whether they had heard various radio health programs broadcast via Radio Nepal and other FM stations over the last six months. The survey results reveal that a relatively small proportion of respondents in the two districts were exposed to these radio health programs, with husbands being the most likely to report having listened to the programs. The most commonly listened to program (reaching almost half of the husbands) was *Jana Swastha Karyakram* (26%-43% in Jhapa; 13%-41% in Banke) followed by *Sewa Nai Dharma Ho* (22%-36% in Jhapa; 7%-23% Banke). *Jeevan Ko Jimmewari* was reported to have heard by 14%-20% of respondents in Jhapa and 7%-27% in Banke.

Table 9.1 Percent distribution of RDW, husbands and MIL who were exposed to the radio health programs in the follow up survey

Heard of the following programs on the radio in last 6 months	Jhapa			Banke		
	RDW	Husband	MIL	RDW	Husband	MIL
Jana Swastha Karyakram	37.6	42.9	25.9	27.3	40.8	12.8
Sewa Nai Dharma Ho	28.2	35.8	21.9	16.1	23.2	7.4
Gyan Nai Shakti Ho	24.0	27.4	18.7	18.7	20.6	6.6
Jeevan ko Jimmewari	20.8	19.6	13.5	27.0	31.3	7.4
Total (n)	**900**	**296**	**251**	**840**	**272**	**258**

Jeevan Ko Jimmewari was a radio program designed by NFHP to promote key MNH-related behaviors. In Banke, an Abadhi language version was broadcast. Table 9.2 further shows data on exposure of RDW to *Jeevan Ko Jimmewari* by age, literacy, ethnicity and SES index.

Table 9.2 Percent distribution of RDW by exposure to Jeevan Ko Jimmewari radio health program by selected background characteristics in the follow up survey

Background characteristics	Jhapa	Banke
Age of RDW (in years)	*	ns
15-19	16.2	32.2
20-24	22.3	28.3
25-29	24.4	24.6
30-34	19.0	25.8
35-49	5.8	21.0
Literacy	*	ns
Illiterate	9.3	25.3
Literate	28.7	29.9
Ethnicity	*	*
Brahmin/Chhetri	37.1	18.3
Tibeto-Burman	18.3	16.7
Tharu	16.8	25.4
Dalit	14.3	28.1
Muslim	6.0	30.4
Other terai origin	4.2	40.9
Other	16.7	ϕ
SES Index	*	*
Lowest	6.2	15.1
Second	11.4	19.2
Middle	19.2	33.7
Fourth	32.9	32.0
Highest	32.3	31.4
Total	**20.8**	**27.0**
	900	**840**

**Significant at <.05 level ns= Not significant*
ϕ indicates that a figure is based on fewer than 25 cases and are not shown

All three categories of respondents who reported having heard the *Jeevan Ko Jimmewari* radio health program were further asked about their frequency of listening. A higher percentage of respondents in Jhapa reported listening every week.

Table 9.3 Percent distribution of RDW, husbands and MIL by frequency of listening to radio health program *Jeevan Ko Jimmewari* in the follow up survey

Frequency of listening to *Jeevan Ko Jimmewari*	Jhapa			Banke		
	RDW	Husband	MIL	RDW	Husband	MIL
Every week	21.4	19.0	11.8	15.9	8.2	-
A couple of times a month	28.3	13.8	35.3	35.2	41.2	21.1
Once a month	11.2	20.7	20.6	19.8	21.2	21.1
Less than once a month	8.0	8.6	5.9	6.6	9.4	-
Only listened once or twice	28.3	36.2	23.5	19.4	17.6	36.8
Do not remember	2.7	1.7	2.9	3.1	2.4	21.1
Total (n)	**187**	**58**	**34**	**227**	**85**	**19**

RDW, husbands and MIL who were exposed to *Jeevan Ko Jimmewari* were asked about topics they heard. A large majority of respondents from both Jhapa (70%-90%) and Banke (67%-83%)

districts reported to have heard about when to go for ANC, followed by making financial plans and pregnancy-related danger signs.

Table 9.4 Percent distribution of RDW, husbands and MIL by types of topics they heard from the radio health program *Jeevan Ko Jimmewari* in the follow up survey

Recalled topics on *Jeevan Ko Jimmewari* (Multiple Response)	Jhapa			Banke		
	RDW	Husband	MIL	RDW	Husband	MIL
When to go for antenatal checkup	89.6	78.9	69.7	82.7	71.1	66.7
Making financial plan	52.2	47.4	45.5	75.5	73.5	86.7
Danger sign during pregnancy	46.7	49.1	33.3	55.0	57.8	33.3
Use of SBA	30.2	24.6	36.4	50.9	43.4	73.3
About newborn care	30.8	28.1	39.4	27.7	26.5	33.3
Transportation and blood arrangements	24.7	17.5	12.1	21.8	18.1	6.7
About newborn danger signs	17.6	19.3	33.3	19.5	25.3	20.0
About family planning	17.6	21.1	18.2	18.6	36.1	26.7
Postnatal danger signs	12.6	10.5	12.1	27.3	16.9	6.7
Delivery care (six cleans)	8.8	7.0	6.1	11.8	22.9	6.7
About FCHV's services	7.7	3.5	3.0	21.4	22.9	13.3
Other§	4.9	8.8	12.1	-	1.2	-
Do not know	1.6	8.8	12.1	0.9	1.2	-
Total (n)	**182**	**57**	**33**	**220**	**83**	**15**

§ Other includes: children's education; making family happy; clean delivery kits.

RDW, husbands and MIL exposed to the radio health program were further asked about who they discussed the radio program with. Many did report having discussed the radio program with at least one person, typically their spouse (Table 9.5).

Table 9.5 Percent distribution of RDW, husbands and MIL by discussion on the radio health program *Jeevan Ko Jeemmewari* with others in the follow up survey

Person whom the *Jeevan Ko Jimmewari* was discussed (Multiple Response)	Jhapa			Banke		
	RDW	Husband	MIL	RDW	Husband	MIL
Spouse	26.4	36.8	39.4	55.0	68.7	66.7
Mother/Mother-in-law	8.2	1.8	9.1	22.3	9.6	6.7
Father/Father-in-law	-	1.8	3.0	0.5	3.6	33.3
Sister/ Sister-in-law	9.9	1.8	6.1	48.2	3.6	33.3
Friends/neighbors	13.7	15.8	30.3	37.7	38.6	40.0
Other (daughter/ sister-in-law)	0.5	-	9.1	1.4	1.2	-
None	63.7	56.1	48.5	25.0	22.9	26.7
Do not know	-	1.8	-	-	-	-
Total (n)	**182**	**57**	**33**	**220**	**83**	**15**

9.2 Exposure to the street theatre and wall paintings

RDW, husbands and MIL were asked if they had seen any street theater performance on health in the past six months. Only a small proportion reported having seen such performances. Those who had were further asked about the topics that they had seen. Antenatal care and birth preparedness were reported by a large proportion (Table 9.6).

Table 9.6 Percent distribution of RDW, husbands and MIL who have seen street theater performance on health related matters in the past 6 months in the follow up survey

Topics of the street theatre watched (Multiple Response)	Jhapa			Banke		
	RDW	Husband	MIL	RDW	Husband	MIL
Antenatal care	1.6	5.1	1.2	5.8	12.9	3.5
Birth preparedness	1.0	5.1	0.4	4.8	8.5	2.7
Skilled birth attendant	0.9	2.0	0.4	3.2	5.5	1.9
Other§	0.8	2.7	0.4	1.1	-	0.4
No performance seen	97.6	91.9	98.0	93.2	87.1	96.1
Total (n)	**900**	**296**	**251**	**840**	**272**	**258**

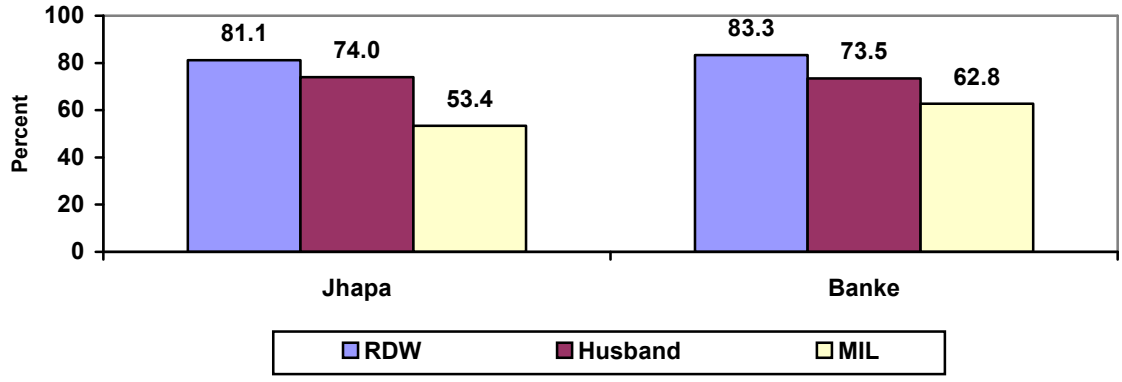
§ Other includes: accompanying pregnant woman for antenatal check up; diarrhea; use of toilet.

The follow-up survey also inquired concerning exposure to wall paintings. Overall, a quarter of RDW (29% in Jhapa; 24% in Banke), one-third of husbands (33% Jhapa; 35% Banke) and less than 10% of MIL (8% in Jhapa; 5% in Banke) reported having seen wall paintings in the past six months (table not shown). Among those who saw wall paintings most reported that the information presented was on antenatal care.

9.3 Exposure to *key chain*

Under CB-MNC BPP key chain were distributed to RDW and their families in Jhapa and Banke, This was used to deliver messages on birth preparedness, recognition of dangers signs, and essential newborn care. The survey assessed distribution coverage and use of the key chain. Upon showing the BPP key chain, all three categories of the respondents were asked if they had seen it in the past. Over four-fifths (81%-83%) of the RDW, nearly three-quarters (>73%) of the husbands and over half (53%-63%) of the MIL reported they had seen them (Figure 9.1).

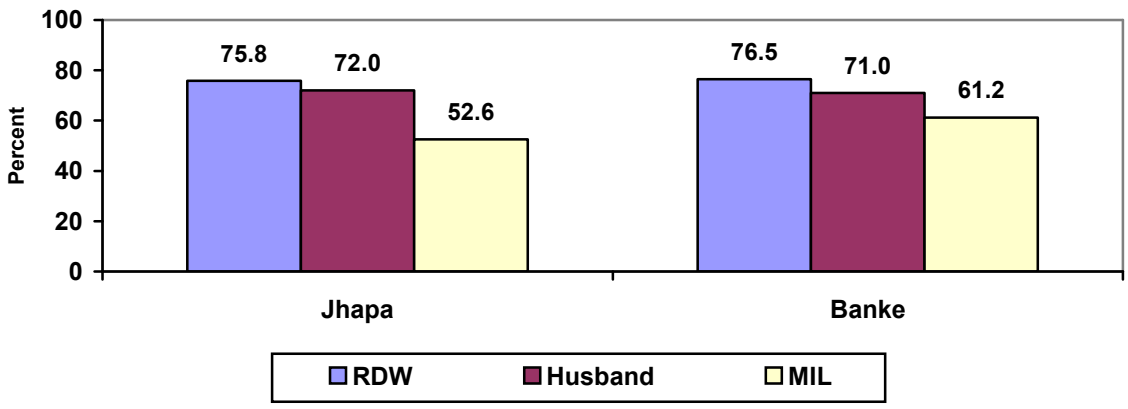
Figure 9.1 Percentage distribution of respondents who have seen the BPP key chain in the follow up survey



n= Jhapa (900 RDW, 296 husbands, 251 MIL); Jhapa (840 RDW, 272 husbands, 258 MIL)

More than three-quarters of RDW from both districts reported that they were provided with BPP key chains during their last pregnancy (Figure 9.2).

Figure 9.2 Percentage distribution of respondents who were given BPP key chain during their or their wife/DIL's last pregnancy in the follow up survey



n= Jhapa (900 RDW, 296 husbands, 251 MIL); Jhapa (840 RDW, 272 husbands, 258 MIL)

RDW (n=48 in Jhapa and 57 in Banke) who reported having seen the BPP key chain but not received it were further asked about the reasons for not receiving it. The most frequently reported reason given in Jhapa was that they did not know about it (40%) and in Banke - that the FCHV was out of stock (49%). Among those who received the key chain, 91% of the RDW from Jhapa and 97% from Banke reported receiving it from FCHVs (table not shown).

Most women reported having received the key chain no later than the 5th month of pregnancy (Table 9.7).

Table 9.7 Percent distribution of RDW time when they first get BPP key chain in the follow up survey

Number of months pregnant when first received the key chain	Jhapa	Banke
<4 months	26.1	9.5
4-5 months	50.6	58.8
6 or more months	23.3	31.8
Total (n)	**682**	**643**

Respondents were also asked how frequently they referred to the key chain during their or their wife/DIL's last pregnancy. More than a quarter of RDW in both districts reported that they looked at the key chain at least once a week and another 20% RDW in Jhapa and 37% in Banke did so 2-3 times a month. Over one third (35%) of RDW in Jhapa and nearly one fifth (17%) in Banke referred it only once or twice during their pregnancy or postpartum stages. Only a small percentage (3%-5%) of the RDW reported not referring to it at all (Table 9.8).

Respondents who reported using the BPP key chain during their or their wife/DIL's last pregnancy were further asked about their purposes in doing so. The most frequently cited purposes given by the respondents are presented in Table 9.8.

Table 9.8 Percent distribution of RDW, husbands and MIL who consulted BPP key chain during their or their wife/DIL's last pregnancy in the follow up survey

Description	Jhapa			Banke		
	RDW	Husband	MIL	RDW	Husband	MIL
Frequency of looking at or referring to the Key Chain during pregnancy and postpartum						
At least once a week	26.8	11.7	4.5	29.5	7.8	4.4
Two to three times a month	20.1	15.5	5.3	37.2	25.4	12.0
Once a month	13.0	13.1	9.8	13.4	20.7	17.7
Once or twice during pregnancy/delivery	34.8	46.0	39.4	17.3	34.7	46.2
Not at all	5.3	13.6	40.9	2.6	11.4	19.6
Total (n)	**682**	**213**	**132**	**643**	**193**	**158**
Purposes of using key chain						
As a source of routine/regular information	93.3	3.3	9.0	65.7	59.6	40.2
As a source of information during an emergency	88.1	83.2	76.9	76.4	72.5	51.2
To know about how to recognize maternal danger signs (pregnancy, delivery and postpartum)	92.6	87.5	84.6	91.2	86.5	77.2
To know about how to recognize newborn danger sign and what to do	82.7	78.3	69.2	85.8	73.7	66.1
To know about when to start family planning	71.1	70.1	28.2	58.1	57.9	23.6
To share with somebody else about the topics covered in the Key Chain	60.4	51.6	37.2	68.1	59.6	57.5
To convince somebody to do something a new way as suggested in the key chain	50.9	46.7	41.0	62.3	54.4	48.8
To stimulate discussions with family members	57.3	60.9	48.7	60.7	60.2	55.9
Total (n)	**646**	**184**	**78**	**626**	**171**	**127**

RDW who had received the BPP key chain were also asked who else in the family used it. More than 80% of RDW in both districts said that their husbands also looked at it followed by mothers (24% in Jhapa and 37% in Banke) and other family members (24% in Jhapa and 14% in Banke) (table not shown).

The majority of the RDW and husbands from both districts (69% RDW and 72% husbands in Jhapa; and 80% RDW and 82% husbands in Banke) reported that they discussed the information given in the BPP key chain with their spouses. Similarly, about 39% of RDW and 22% of husbands in Jhapa and 47% of RDW and 44% of husbands in Banke reported discussing it with friends and neighbors. More than a quarter of MIL in Jhapa and over half in Banke said that they discussed it with friends and neighbors. Less than a quarter of RDW and husbands in both districts, but over half of the MIL in Jhapa and one-third in Banke reported that they did not discuss about the key chain with anyone else (table not shown).

Nearly half (46%) of RDW in Jhapa and over three-fifths (63%) in Banke reported that FCHVs spoke with other members of their family on the contents of key chain (Table 9.9). According to the RDW they mostly talked to their husbands (32% in Jhapa and 54% in Banke) and the MIL (16% in Jhapa and 22% in Banke).

Table 9.9 Percent distribution of RDW mentioning that FCHVs discussed contents of the key chain with other family members in the follow up survey

The family members with whom FCHV spoke with to, try to convince them to support one or more of the behaviors on the key chain (Multiple Response)	Jhapa	Banke
Husband	32.0	53.7
MIL	16.0	21.5
FIL	2.2	1.2
Friends/neighbors	1.6	1.4
Other family members	8.7	7.3
Nobody	54.3	36.7
Total (n)	**682**	**643**

§ Other includes: sister-in-law; mother; father; daughter; niece; brother-in-law; grandmother.

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