Evaluation of Intensification of Maternal and Neonatal Micronutrient Program in Nepal

(End line Survey)

Final Report

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The Micronutrient Initiative

C/O Canadian Cooperation Office

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Executive Summary

Anaemia is a severe public health problem in Nepal. Nepal Demographic and Health Survey (NDHS) 2006 reported an overall anaemia prevalence of 36% among women whereas anaemia prevalence greater than 20% is already considered a moderate public health problem. The prevalence of anaemia among pregnant women was even higher at 42%.

The Government of Nepal with support from various international donor agencies has been making concerted efforts to tackle the problem of anaemia among women. An integrated community-based program of micronutrient interventions, involving FCHVs (Female Community Health Volunteers) in distribution of IFA tablets was launched by the Department of Health Services, Govt. of Nepal with technical and financial support from Micronutrient Initiative (MI). The first phase of the IMNMP (Intensification of Maternal and Neonatal Micronutrient Program) was launched in five priority districts in 2003 as a joint collaboration between Department of Health Services, Micronutrient Initiative (MI), WHO, UNICEF and other partners. The overall objective of the intensification program was to train all health workers and FCHVs in order to enable them to interact with pregnant and post-partum women and to counsel them regarding the importance of preventing and treating micronutrient deficiencies. The program activities also include counseling and raising awareness on the importance of micronutrients for mothers and their children, repacking of IFA tablets in small containers, postpartum Vitamin A supplementation as also counseling on antenatal check-ups, de-worming, use of adequately iodized salt and dietary diversification.

The program also established a mechanism for delivering IFA tablets and vitamin A capsules through FCHVs, which otherwise was not in place, despite the existence of government policy in this regard. The main objective of the program is therefore to implement the existing government policy by establishing community-based delivery mechanisms.

The evaluation of the intensification program has revealed positive results in terms of increased coverage and compliance of IFA tablets among pregnant and postpartum women[1]. This has been possible owing to increased awareness among pregnant women about the IFA supplements. Encouraged by this, MI provided technical and financial support in expanding the program to 35 districts during the years 2004-2008.

The evaluation of the program in later years has revealed further improvement in IFA supplementation. In view of these encouraging results, MI planned to support technically and financially to Department of Health Services and Child Health Division to expand the program in 12 more districts in year 2009-2010.

In this regard, MI commissioned The Nielsen Company Nepal Pvt. Ltd. to carry out survey to evaluate intensification of maternal and neonatal micronutrient program in 2009-2011. In order to evaluate the impact of the intervention, an evaluation was undertaken to document changes mainly in coverage and compliance of iron supplementation among pregnant and post partum women. Similarly, status of iron supplementation in selected districts where program has been in place for at least last one year was carried out. Two rounds of enumeration were undertaken for the evaluation. While the first round of evaluation was baseline as well as endline survey and was carried out in September / October 2009 and the second round was endline survey in carried out during March / April 2011

The main objective of the survey was to access the impact of an intensified effort to extend micronutrients supplements to pregnant women and lactating women (Including Vitamin A supplementation to post partum women. The major objective of the evaluation was a). To evaluate the coverage of maternal IFA supplementation among pregnant/ post partum women delivered through health facilities and community based delivery system. b) To measure the compliance with the recommended scheme for IFA supplements for pregnant and post partum women and factors contributing to high as well as low compliance including side effects, that may impair participation. c) To assess the knowledge and practices of health workers and FCHVS regarding the IFA Supplementation.

[1] Endline Survey for Intensification of Antenatal Iron Supplementation Program (2004)- MI and NEW ERA

To achieve the goal, two rounds of survey were conducted in three components/arms (i.e. Component A, Component B and Component C). The Component A is the assessment of status in existing program districts where program has been in place for at least last 12 months. The Component B is the assessment of outcome of the program intervention in new districts to be covered in 2009-10 and Component C (as a comparison group) is the assessment of status in the districts where program is expected to be launched after the year 2009-10).

While the assessment is focused on primary outcome in terms of coverage and compliance of IFA supplementation among pregnant and postpartum women, it also covers secondary outcomes in terms of antenatal care practice, deworming during pregnancy and postpartum vitamin A supplementation. The main respondents of the study were women in the 2nd and 3rd trimester of pregnancy and lactating women having a child up to 1 ″ months old. Besides, health workers and Female Community Health Volunteers were also interviewed to assess their KAP with respect to IFA supplementation program.

The each component of the study had 5 districts and as such the survey was conducted in 15 districts altogether. The survey covered 520 lactating women and 120 health workers/volunteers (VHW/MCHW/FCHVS) in component A. In the components B and C, 120 pregnant women of second trimester, 80 pregnant women of third trimester, 120 postpartum women and 120 health workers/volunteers. For selection of the pregnant and postpartum women, two-stage sample design was used. In the first stage, a population proportional to size (PPS) selection of 40 clusters was undertaken. In the second stage, respondents were selected in each cluster by following EPI method. The study districts are shown in the map below:

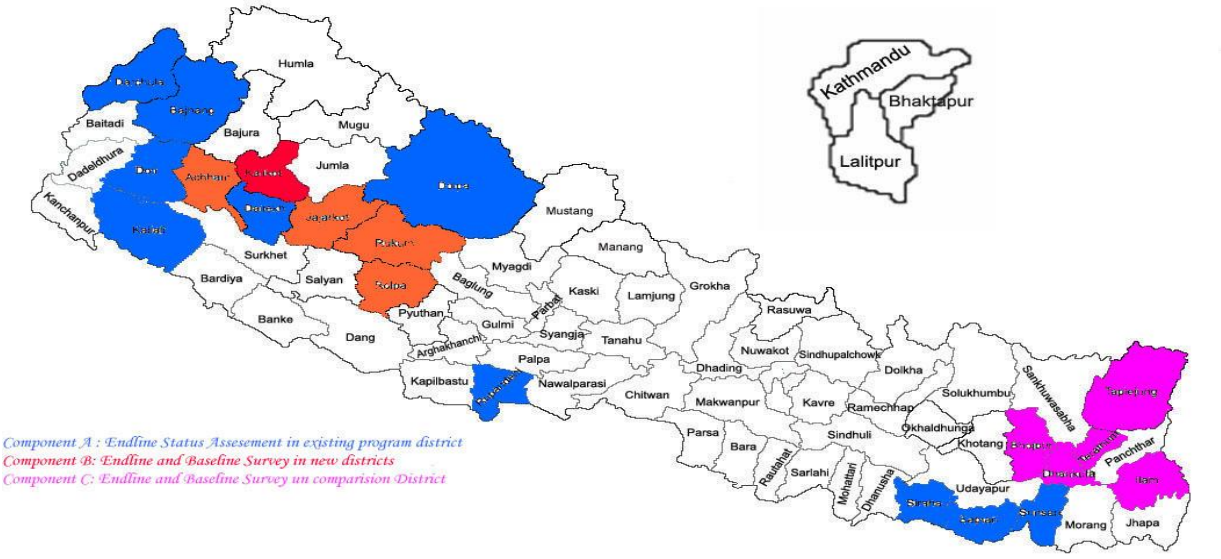


Figure 1: Map of Nepal with survey Districts

Key findings of the evaluation from the end line survey 2011

Iron Coverage and Compliance

- The proportion of post partum women taking any amount of IFA tablets during pregnancy in Com A, B and C were 93%, 83% and 87% respectively. The difference between IFA coverage in Com B between two rounds of survey was significant (Com B: R1- 65% R2-83%)[2]. Similarly, IFA among pregnant during their 3rd trimester in Com B significantly increased as compared to earlier round (R1-61%, R2-80%)[3].

- The proportion of post partum women taking any amount of IFA tablets in Com A, B and C were 63%, 74% and 48% respectively. The proportion of women in Com B has significantly increased

[2] Chi-Square test at 5% level of significance (Between Com B R1 and BR2 p=0.001)
[3] Chi-Square test at 5% level of significance (Between Com B R1 and BR2 p=0.001

between two rounds of survey (R1-28.3%, R2-74.2%)[4] whereas; the proportion in Com C has declines (R1- 60%, R2-47%)[5].

- The compliance of IFA supplementation among pregnant in Components A, B and C were 67%, 66 % and 65% respectively. While comparing with the previous round a remarkable change has been observed in component B (R1-44.1%, R2-66%)[6] whereas there was no significant differences in A and C[7] as compared to previous round. Again in Component B, there was a significant differences in compliance among 2nd and 3rd Trimester between two rounds (2nd Trimester[8]-R1-23.7%, R2-44% and 3rd Trimester[9] -R1-36.3%, R2- 54%).

- The compliance[10] of IFA supplementation among postpartum women in Components B was highest (67%) as compared to other component A (58%) and C (39%). The compliance among the same groups in previous round in Components A, B and C was 50%, 26%, and 53% respectively. From this comparison, it can be easily concluded that compliances in Component B has significantly[11] increased.

- The coverage during pregnancy among literate across all components was at least 87%. There were no major changes across all components while comparing with previous round data. However, IFA coverage has increased in all components for illiterate especially in Com B and Com C.

  Similarly the IFA coverage during post partum among literate in Com A, B and C were 77%, 55% and 42% respectively. IFA consumption has gone down in Com C (R1-70%, R2-42%). Among illiterate, the coverage has increased in Com A and Com B.

Vitamin A and De-worming tablets coverage

- The coverage of Vitamin A for post partum women in components A, B and C was 70.6%, 68.3% and 60% respectively. The trend significantly[12] increased for components A (R1-46.2%, R2-70.6%) and B (R1-30%, R2-68.3%) in Round 2 as compared to Round 1.

- The coverage of de-worming tablets during pregnancy in components A, B and C was 84.2%, 69.7% and 71.6% respectively. The coverage has increased substantially in Round 2 for Components A (R1-69.4%, R2-84.2%)[13] and B (R1-52.2%, 69.7%) but it has slightly decreased for Component C.

Knowledge, Attitude and Perception

- The knowledge of taking additional care during pregnancy was highest in Component C (99.4%) as compared to component A (97.7%) and Component B (92.5%). However the IMNMP program in Com B had shown an increasing awareness trend in second round of the survey (Com B: R1-71.7%, R2-92.5%). Additional care included taking rest, eating nutritious food, avoiding heavy work/carrying heavy things, going for regular checkups, taking iron supplements, avoiding long journey and avoiding alcohol and smoking.

- There was a significant improvement in the practice of antenatal check up at least for once among respondents in Component B (R1-65.7%, R2-78.2%)[14] compared to Round 1. It was 92.9% and

[4] Chi square test at 5% significant level (between B R1 and B R2 p= 0.000)
[5] Chi square test at 5% significant level (between B R1 and B R2 p= 0.05)
[6] Chi square test at 5% significant level (between B R1 and B R2 p= 0.001)
[7] Chi-square test at 5% level of significance (between A and C, p=0.666)
[8] Chi square test at 5% significant level (between B R1 and B R2 p= 0.001)
[9] Chi square test at 5% significant level (between B R1 and B R2 p= 0.026)
[10] IFA intake of at least 80% of total requirement has however been considered as cut-off for compliance in this study
[11] Chi-square test at 5% level of significance (between A and B, p=0.000; between B and C. p=0.000; between A and C, p=0.536)
[12] Chi square test at 5% significant level (between A R1 and A R2 p= 0.000) (between B R1 and B R2 p= 0.000)
[13] Chi square test at 5% significant level (between A R1 and A R2 p= 0.000)
[14] Chi square test at 5% significant level (between B R1 and B R2 p= 0.000)

85.6% in Com A and C respectively in round 2. On an average, respondents from Components A, B and C had taken ANC check-ups for 3.5 times, 2.3 times and 3.1 times respectively.

- Awareness regarding IFA supplementation among the respondents in component B has significant improvement in this round (R1-78.9%, R2-90%)[15]. Importance of Iron supplementation during pregnancy for them was to increase blood, to ensure good health of the child, to enrich vitamin C, to avoid heavy bleeding, to become nutritious, to gain energy etc.

- FCHVs are the popular source for getting information of IFA supplementation during pregnancy and post partum in Component A and Component B. The extra involvements of FCHVs such as recommending IFA supplements are distinctly observed in Component B as compared to earlier round. Regarding component C, health post and health facilities seem to be more active in providing information and on recommending IFA supplementation.

Health Workers

- Almost all health workers/volunteers from Components A and B and all of the MCHWs and VHWs from Component C had distributed iron/folic supplementation to pregnant women. Majority of FCHVs of Component C had not distributed such supplementations. Majority of health workers/volunteers who had been involved in IFA tablets' distribution mentioned that they had always been involved in such tasks except FCHVs from Component C.

- The health workers/volunteers who have received training on IFA supplementation was high from Component A (94.2%) and Component B (86.4%) than from Component C (40%). Most of them appreciated the value of the training program (Com A: 86%, Com B: 70%, Com C: 27%).

- According to FCHVs from all the components, IMNMP work has not created any kind of overload to perform their assigned activities.

[15] Chi square test at 5% significant level (between B R1 and B R2 p= 0.000)

Chapter 1: Introduction

1.0 Background

Anaemia is a severe public health problem in Nepal. Nepal Demographic and Health Survey (NDHS) 2006 reported an overall anaemia prevalence of 36% among women whereas anaemia prevalence greater than 20% is already considered a moderate public health problem.[16] The prevalence of anaemia among pregnant women was even higher at 42%.

The ill-effects of maternal anaemia during pregnancy on the growth of the foetus are widely known. Anaemia during pregnancy increases the risk of foetal growth retardation, low birth weight and premature delivery. It reduces resistance to infection of both the mother and baby, therefore also increasing the risk of prenatal death. Postpartum haemorrhage is a major cause of death in Nepalese mothers. A healthy mother can tolerate up to one-litre blood loss during childbirth. But loss of one-litre of blood can lead to death in an anaemic mother. Therefore, anemia plays a secondary role in all maternal deaths due to haemorrhage.

The Government of Nepal with support from various External Development Partners as been making concerted efforts to tackle the problem of anaemia among women. An integrated community-based program of micronutrient interventions, involving FCHVs (Female Community Health Volunteers) in distribution of Iron and Folic Acid (IFA) tablets was launched by the Department of Health Services, Govt. of Nepal with technical and financial support from Micronutrient Initiative (MI). The first phase of the IMNMP (Intensification of Maternal and Neonatal Micronutrient Program) was launched in five priority districts in 2003 as a joint collaboration between Department of Health Services, Micronutrient Initiative (MI), WHO, UNICEF and other partners. The overall objective of the intensification program was to train all health workers and FCHVs in order to enable them to interact with pregnant and post-partum women and to counsel them regarding the importance of preventing and treating micronutrient deficiencies. The program activities also include counseling and raising awareness on the importance of micronutrients for mothers and their children, repacking of IFA tablets in small containers, postpartum Vitamin A supplementation also counseling on antenatal check- ups, de-worming, use of adequately iodized salt and dietary diversification.

The program also established a mechanism for delivering IFA tablets and vitamin A capsules through FCHVs, which otherwise was not in place, despite the existence of government policy in this regard. The main objective of the program is therefore to implement the existing government policy by establishing community-based delivery mechanisms.

The evaluation of the intensification program has revealed positive results in terms of increased coverage and compliance of IFA tablets among pregnant and postpartum women[17]. This has been possible owing to increased awareness among pregnant women about the IFA supplements. Encouraged by this, MI provided technical and financial support in expanding the program to new districts in phased manner.

In this regard, MI commissioned The Nielsen Company Nepal Pvt. Ltd. to carry out survey to evaluate intensification of maternal and neonatal micronutrient program in Nepal.

[16] Iron Deficiency Anemia Assessment, Prevention and Control: A guide for programme managers (2001). World Health Organization.
[17] Endline Survey for Intensification of Antenatal Iron Supplementation Program (2004). MI and New ERA.

1.1 Need for the Study

Evaluation of the IMNMP program so far has revealed further improvement in iron supplementation. In view of these encouraging results, MI provided technical and financial support to the Department of Health Services, Child Health Division, in expanding the program in 12 more districts in the year 2009-10. The outcome of the intervention was evaluated to document changes mainly in coverage and compliance of IFA supplementation among pregnant and postpartum women. Similarly, status of IFA supplementation in selected districts where program has been in place for at least last one year was carried out in two rounds. The first round was carried out between August to October 2009, the second round was carried out during March to April 2011.

1.2 Objectives of the Study

The main objective of the survey was to assess the outcome of the intensified effort to extend micronutrient supplements to pregnant women and lactating women (including Vitamin A supplementation to post-partum women) in terms of coverage and compliance in selected districts. The major objectives of this evaluation were as follows:

- To evaluate the coverage of maternal IFA supplements among pregnant women/postpartum women and coverage of vitamin A supplements among postpartum women delivered through health facilities and community-based delivery system;

- To measure the compliance with the recommended scheme for IFA supplements for pregnant and postpartum women and factors contributing to high as well as low compliance including side effects, that may impair participation;

- To assess the knowledge and practices of health workers and FCHVs regarding the IFA supplementation.

Chapter 2: Methodology

The evaluation design of the Intensification of Maternal and Neonatal Program (IMNMP) mainly entails overall evaluation of existing program districts and effectiveness study in the new program districts with pre-post design in program to comparison districts. The evaluation has three components (A) assessment of status in existing program districts (where program has been in place for at least for last 12 months), (B) assessment of outcome of the program intervention in new districts, and (C) assessment of status in future program districts (as comparison group). For the evaluation, two survey enumerations were undertaken. The first was carried out in August to October 2009 and the second was in March/ April 2011.

Component A: Assessment of status in existing program districts (where program has been in place at least for the last 12 months)

With support from MI, IMNMP was introduced in 43 districts during the years 2003-2008. MI selected five districts randomly for each of the two enumerations during 2009 and 2011 through a random selection procedure. For selection, name of each eligible district was written in a small piece of identical paper and was folded. Five pieces of these folded papers were then drawn for each enumeration. The districts already selected in the 2009 enumeration were not included while selecting districts for the 2011 enumeration.

For 2009 - Kailali, Bajhang, Doti, Siraha, and Sunsari
For 2011- Rupendehi, Dailekh, Darchula,Saptari and Dolpa

The primary indicator for assessment of the program implementation was the status of coverage and compliance of IFA supplements among pregnant and postpartum women. Since, there was no baseline data on coverage and compliance of IFA supplements in among pregnant and postpartum women for the program districts in Component A, findings from this survey will be studied in comparison to the national coverage as revealed by Nepal Demographic and Health Survey 2006.

Component B: Assessment of outcome (coverage and compliance of IFA supplements) of the program intervention in new districts

For Component B, a baseline has been conducted and an endline survey will also be conducted to have a pre-test, post-test study design that will be used to compare characteristics of pregnant and postpartum women at baseline to those at endline (12 months following implementation).

The primary indicator to demonstrate effectiveness of the intervention was a change in the coverage and compliance of IFA supplements. Data was also collected covering a number of key areas in order to explain differences in outcome and control for possible confounding variables.

Component C: Assessment of status in future program districts (as comparison group).
As a comparison group with respect to Component B, , an assessment was carried out in 5 out of the 11 districts where the program is expected to be implemented by March 2010. Five districts namely Bhojpur, Ilam, Dhankuta, Taplejung, and Terhathum were selected randomly as following the same procedure as in Component A (excluding the three districts in Kathmandu valley namely Bhaktapur, Lalitpur and Kathmandu).

2.1 Target Groups

- Women in the 2nd and 3rd trimester of pregnancy (since this is the period when supplementation of IFA becomes crucial for optimal fetal development and to keep the status of the mother healthy).

- Lactating mothers having a child up to 1 ½ months old (program covers this group for Vitamin A supplementation)

2.2 Study Area

The districts selected for the evaluation are shown in table 1 below:

Table 1: Selected Districts

	Survey Carried Out	Component A	Component B	Component C
First Enumeration	September/ October 2009	Endline-Status Assessment In existing program districts	Baseline in new districts	Baseline in comparison districts
		Districts		
		Kailali, Bajhang, Doti, Siraha and Sunsari	Rolpa, Achham, Kalikot, Jajarkot, Rukum	Bhojpur, Ilam, Dhankuta, Taplejung and Terhathum
Second Enumeration	March /April 2011	Endline- Status Assessment in existing program districts	Endline in new districts.	Endline in Comparison districts
		Districts		
		Rupendehi, Dailekh, Darchula, Saptari, Dolpa	Rolpa, Achham, Kalikot, Jajarkot, Rukum	Bhojpur, Ilam, Dhankuta, Taplejung and Terhathum

2.3 Sample Selection Criteria

The goal of the sampling procedure was to provide a representative sample of pregnant women in the second and third trimester of pregnancy, and lactating mothers who are no more than one and one-half months post-partum.

2.3.1 Sample size Calculation

For Component A

A sample size of 520 lactating women (up to 1 ½ months post-partum) was selected to assess the status of coverage and compliance of IFA supplements. This sample size was based on the assumption that coverage of IFA supplementation among postpartum women when they were pregnant would be 80%[18] (with 5% precision, 95% confidence level and design effect of 2).

For Components B and C

To ensure that an adequate sample is measured to assess program outcome, changes in the coverage with IFA supplementation among pregnant (2nd and 3rd trimester) and lactating women between baseline and follow-up will be the primary parameter to be tested. The sample size has been calculated to detect a difference in the proportion of pregnant women taking IFA supplementation at baseline and endline both in program (component B) and the comparison groups (component C). To meet this objective, a sample size of 120 pregnant women in the 2nd trimester and 80 pregnant

[18] This is based on the evaluation of the program in the first phase districts in 2003-2004. After one year program intervention, coverage of IFA supplementation was increased from 47% to 78% which kept increasing in subsequent years. In 2008, the coverage in the same first phase districts reached to 86%.

women in the 3rd trimester were targeted in both components B and C. This sample size assumes baseline coverage among second and third trimester pregnant women at 27% and 47% respectively and endline coverage at 53% and 78% [19]respectively.

Similarly, a sample size of 120 postpartum women was selected to detect changes in the coverage with IFA supplementation among these women when they were pregnant. This sample size assumes the baseline coverage at 40% and endline coverage at 66%[20].

The above sample size was based on a two-tailed hypothesis that there will be a difference in coverage between baseline and endline at a 5% significance level with 80% power, and has been adjusted by a design effect of 2 to account for the multi-stage sample selection.

The detail sample breakup is outlined in *table 2* below:

Table 2: Sample Breakup

	First Enumeration				Second Enumeration			
	Com A	**Com B**	**Com C**	**Total**	**Com A**	**Com B**	**Com C**	**Total**
Pregnant -2nd trimester	-	120	120	240	-	120	122	240
Pregnant- 3rd trimester	-	80	80	160	-	80	80	160
Post Partum	520	120	120	760	520	120	120	760
Total	**520**	**320**	**320**	**1,160**	**520**	**320**	**320**	**1160**

[19] Based on evaluation of the program in Phase 1 districts.
[20] Based on evaluation of the program in Phase 1 districts.

2.3.2 Sample Frame and Design

The evaluation was conducted in the districts as mentioned in the TOR provided to Nielsen by MI. The criterion for selection of the districts has already been described earlier in this Chapter. In consultation with MI, one district (Humla) was replaced by the district of Rolpa owing the fact the survey team could not obtain air tickets to visit the district during the time of survey (Humla is the most inaccessible district in Nepal which is located at far-west mountain. The district is not accessible by motorable road and it takes over 8 days on foot to reach the headquarter of the district).

A two-stage sample design was used for the selection of pregnant and lactating women for each round of enumeration in all components. An identical sampling protocol was implemented at this enumeration and same sampling protocol will be implemented at 2010 enumeration.

First stage

All VDCs from selected districts of component A and all wards of the selected districts of component B and C were listed along with their population data. A cumulative population column was also prepared using the most recent census data available from the Bureau of Central Statistics. A population proportional to size (PPS) selection of 40 clusters (VDCs in COM A and wards in COM B and C) were undertaken for the project districts in each of the components A, B and C.

In each component, the total population figure was noted from the list of wards and the sampling fraction was calculated by dividing population figure by 40. A random start was selected from a table of random numbers to identify the first ward with subsequent wards selected by adding the value of the sampling fraction to the random start in order to select the other 39 wards.

Second stage

The field team prepared a sketch map of each sampled cluster delineating mainly the public places, villages, forests, rivers, trails and so on prior to proceeding for the data collection activity in consultation with local leaders and key informants. Then the team divided the cluster into 3-5 segments, depending on the settlement pattern within the cluster, with the estimated number of households in each segment. The field team then chose one segment randomly using random number table.

The index house for interview within the selected segment was identified using the 'Spin the Bottle' method. Once the index house was chosen, the interviewer determined if there was an eligible woman (2^{nd} or 3^{rd} trimester pregnant women or 45 days postpartum women) in it. If an eligible woman lived there, she was interviewed. If an eligible woman was not in the household, the interviewer moved to another household. This process was be continued until the required numbers of eligible respondents were interviewed in the sampled cluster.

In the component A, the process was therefore undertaken until 13 postpartum women were identified and enumerated in each cluster. Similarly, in the components B and C districts, the process was continued until 3 pregnant women in their second trimester, 2 women in their third trimester and 3 postpartum women were identified and enumerated in each cluster. If a VDC/ward didn't have sufficient number of particular respondents, balance number of the respondents were identified in neighboring VDCs/wards and enumerated.

2.4 KAP Study among FCHVs and Health Workers

In addition to the collection of data on pregnant women, the evaluation included a sub-study of KAP among FCHVs, and health workers (MCHWs and VHWs) in both component A and B. A set of structured questionnaire was administered each for FCHV group and the health workers group. The study team visited the related health facilities for interview of health workers and data was also collected relating to storage of IFA tablets and vitamin A capsules, registers maintenance and so on.

Within each of the wards selected for evaluation, locally operating FCHVs or health workers (MCHWs and VHWs) were interviewed through convenience sampling. One such community based health

worker has been interviewed in each of the wards. The structured quantitative interview was designed to collect information on background characteristics of health workers and FCHVs, knowledge of health workers and FCHVs on ANC check-up, anaemia, IFA supplementation, vitamin A and de-worming as also behaviour of health workers and FCHVs in counseling and IFA supplementation.

Chapter 3: Sample Profile and Demographic Characteristics

3.1 Districts Wise Sample Distribution

Altogether 400 pregnant women of 2nd and 3rd trimester, 760 post partum women and 360 health personnel were interviewed from the survey districts covering all three components for the study in first enumeration as well as in second enumeration. Detailed districts wise sample distribution is outlined in *table 3* below.

Table 3: Districts Wise Sample Distribution

	Round 1			
Component A	**Post Partum**		**Health Personnel**	
Base	**520**		**120**	
Kailali (%)	29.6		15	
Bhajang (%)	8.3		15	
Doti(%)	11.2		20	
Sihara (%)	30.6		37.5	
Sunsari (%)	20.4		12.5	
Component B	**2nd Trimester**	**3rd Trimester**	**Post Partum**	**Health Personnel**
Base	**118**	**80**	**120**	**120**
Rolpa (%)	12.7	11.3	12.5	12.5
Accham(%)	33.1	33.8	34.2	39.2
Kalikot(%)	12.7	12.5	12.5	13.3
Jajarkot(%)	21.2	21.3	20.8	12.5
Rukum(%)	20.3	21.3	20	22.5
Component C	**2nd Trimester**	**3rd Trimester**	**Post Partum**	**Health Personnel**
Base	**120**	**82**	**120**	**120**
Bhojpur(%)	24.2	23.2	25	30
Illam(%)	28.3	30.5	27.5	22.5
Dhankuta(%)	9.2	9.8	9.2	12.5
Therathum(%)	12.5	12.2	12.5	12.5
Taplejung(%)	25.8	24.4	25.8	22.5

	Round 2			
Component A	**Post Partum**		**Health Personnel**	
Base	**520**		**103**	
Rupendehi (%)	27.5		15.5	
Dailekh(%)	16.5		22.3	
Darchula(%)	9.2		15.5	
Saptari(%)	43.3		37.9	
Dolpa(%)	3.5		8.7	
Component B	**2nd Trimester**	**3rd Trimester**	**Post Partum**	**Health Personnel**
Base	**120**	**80**	**120**	**110**
Rolpa (%)	20.8	23.8	22.5	23.6
Accham(%)	24.2	26.3	22.5	29.1
Kalikot(%)	8.3	7.5	8.3	13.6
Jajarkot(%)	25.8	23.8	25.8	16.4
Rukum(%)	20.8	18.8	20.8	17.3
Component C	**2nd Trimester**	**3rd Trimester**	**Post Partum**	**Health Personnel**
Base	**122**	**78**	**120**	**92**
Bhojpur(%)	29.5	32.1	30	28.3
Illam(%)	32	32.1	32.5	26.1
Dhankuta(%)	12.3	11.5	13.3	8.7
Therathum(%)	13.9	11.5	12.5	9.8
Taplejung(%)	12.3	12.8	11.7	27.2

3.2 Socio-Demographic Characteristics of the Respondents

Table 4 shows the demographic and socio economic status of the respondents. According to data it can be said that still a large number of respondents from all three components were between the age group of 21-25 years as compared to first enumeration. (Com A: 43.5%, Com B: Post Partum – 34.2%, 2nd Trimester – 34.7%, 3rd Trimester – 33.8% and Com C: Post Partum – 35.8%, 2nd Trimester – 31.7%, 3rd Trimester – 37.8%). In both round of the survey, average age of respondents from Com A was 24 years. Similarly an average age

of the respondents in Com B and Com C in first round was 25 years whereas, an average age was 24 years in 2nd round.

No such sweeping change in literacy among the respondent in between two round of survey was observed. As in earlier round, high proportion of literate respondents were from Component C (Round 1- 85%, Round 2- 89%) Similarly, proportion of the respondents who had ever attended school was also observed to be highest in component C (R1 -77%, R2 -85%) as compared to that in component A (R1-38%, R2-39%) and component B (R1-31%, R2-40%) in both enumerations. (*Table 4)*.

Table 4: Socio-Demographic and Economic Status

	Round 1							Round 2						
		COM B			COM C				COM B			COM C		
	COM A	Post Par	2nd Tri	3rd Tri	Post Par	2nd Tri	3rd Tri	COMA	Post Par	2nd Tri	3rd Tri	Post Par	2nd Tri	3rd Tri
	520	120	118	80	120	120	82	520	120	120	80	120	120	80
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Age of Respondent														
15-20 years	29.2	23.3	19.5	25	20	28.3	22	24.6	31.7	32.5	32.5	25.8	35.2	28.2
21-25 years	43.5	34.2	34.7	33.8	35.8	31.7	37.8	44.0	33.3	40	31.3	39.2	33.6	34.6
26-30 years	20.2	20	28.8	18.8	23.3	24.2	24.4	24.2	22.5	17.5	23.8	24.2	23	21.8
31-35 years	5	12.5	14.4	13.8	15	10	12.2	5.8	6.7	7.5	7.5	7.5	6.6	15.4
36-40 years	1.7	7.5	1.7	7.5	5	5.8	2.4	0.8	4.2	2.5	5	2.5	1.6	-
41-45 above years	0.4	2.5	0.8	1.3	0.8	-	1.2	0.4	1.7	-	-	0.8	-	-
Average Age	24	26	25	25	25	25	25	24	25	24	24	24	23	24
Literate														
Yes	46	43.3	46.6	47.5	83.3	88.3	81.7	43.1	50	49.2	42.5	90	91.8	84.6
No	54	56.7	53.4	52.5	16.7	11.7	18.3	56.9	50	50.8	57.5	10	8.2	15.4
Ever attended school														
Yes	38.1	30.8	28.8	33.8	78.3	83.3	78	39.2	42.5	42.5	36.3	86.7	85.2	83.3
No	61.9	69.2	71.2	66.3	21.7	16.7	22	60.8	57.5	57.5	63.8	13.3	14.8	16.7

3.3 Age of the Respondents at the Time of Marriage

A large majority of the respondents (from all three components) were married at 15-20 years of age (R1-Com A: 82.4%, Com B: 85.6% and Com C: 72.4% and R2- Com A: 86%, Com B: 86% and Com C 72%) (*Figure 2)*. The mean age in both rounds during a time of marriage was around 17 years in Com A and Com B and mean age was 19 years in Com C.

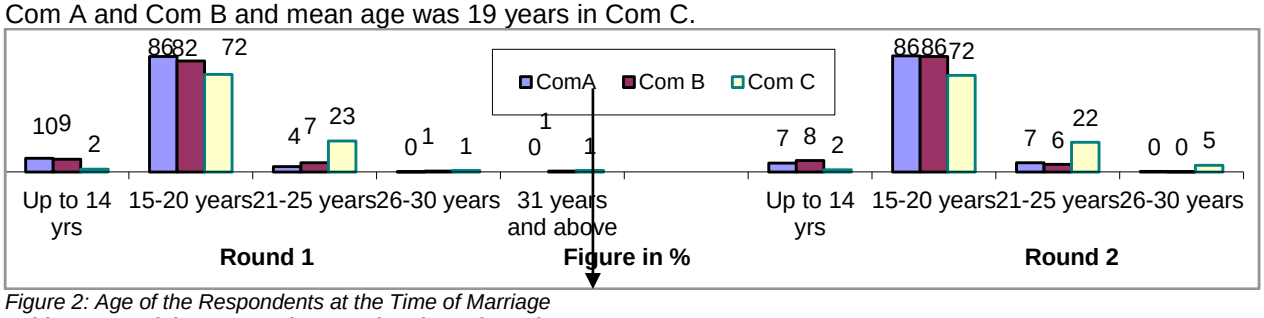


Figure 2: Age of the Respondents at the Time of Marriage

Table 5: Age of the Respondents at the Time of Marriage

	Round 1			Round 2		
	COM A	COM B	COM C	COM A	COM B	COM C
Base : All	**520**	**318**	**322**	**520**	**320**	**320**
Up to 14 yrs (%)	10.2	9.4	2.2	6.7	8.4	1.6
15-20 years (%)	85.6	82.4	72.4	86	85.6	71.6
21-25 years (%)	4	6.9	23	6.9	5.6	21.9
26-30 years (%)	0.2	0.6	1.2	0.4	0.3	5.0
31-40 years(%)	-	0.6	1.2	-	-	-

Average Age(%)	**17.17**	**17.37**	**19.35**	**17.35**	**17.03**	**19.14**

3.4 Incidence of Pregnancy

The number of the respondents who reported that they were primipara (had become pregnant for once) had slightly increased as compared to last round (R1- 32%, R2- 34%). Similarly in both rounds of the survey, less than 1/5th of the selected women were observed to be multipara (had become pregnant for 5 or more times)(R1- 12%, R2-12%). *(Figure 3)*

Proportion of women who were multipara (had become pregnant for 5 or more times) was still remarkably high from Com B (R1-21.7%, R2 -19.1%) as compared to Com A (R1-8.4%,R1-12.4%) and Com C (R1-6.8%, R2-6.5%). It can be noted here that the multipara women in Com A has increased during time between two surveys.

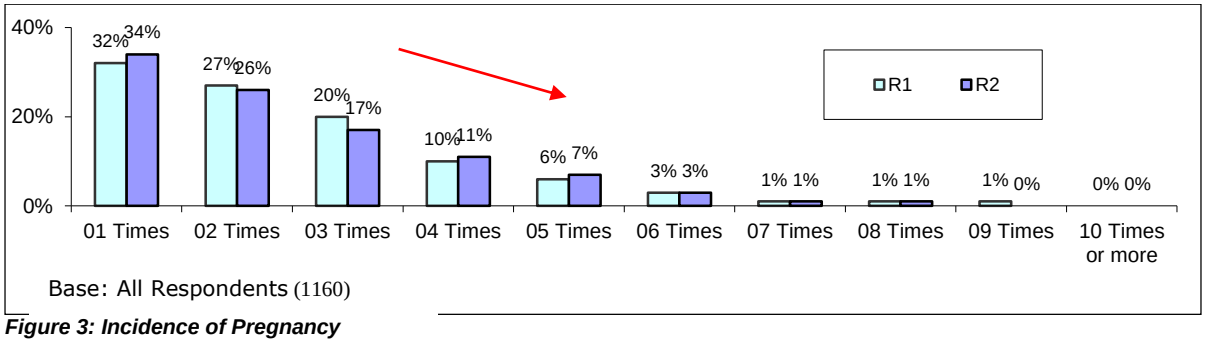


Figure 3: Incidence of Pregnancy

Table 6: Incidence of Pregnancy

	Round 1				Round 2			
	All	**COM A**	**COM B**	**COM C**	**All**	**COM A**	**COM B**	**COM C**
Base : All	**1160**	**520**	**318**	**322**	**1160**	**520**	**320**	**320**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**
01 Times	31.2	30.4	20.8	42.9	33.6	29.8	29.1	44.4
02 Times	27.2	29.0	25.8	25.5	26.4	27.9	22.5	27.8
03 Times	20.3	21.7	20.1	18.3	16.8	18.7	15.9	14.7
04 Times	9.7	10.4	11.6	6.5	10.6	11.3	13.4	6.6
05 Times	5.8	4.2	10.1	4	6.7	6.3	10.3	3.8
06 Times	2.3	1.7	4.1	1.6	2.8	3.3	3.5	1.2
07 Times	1.1	0.2	3.1	0.6	1.1	0.8	2.2	0.3
08 Times	0.9	0.2	2.5	0.6	1.2	1	1.9	0.9
09 Times	1.2	1.9	1.3	-	0.3	0.4	0.3	-
10 Times or more	0.3	0.2	0.6	-	0.6	0.6	0.9	0.3
Average	**2.57**	**2.49**	**3.14**	**2.14**	**2.55**	**2.62**	**2.91**	**2.09**

Chapter 4: Knowledge on Pregnancy care, IFA and Vitamin Supplementation

4.1 Knowledge on Additional Care during Pregnancy

According to NFH Survey 1996, maternal mortality rate in Nepal is estimated to be 539 / 100000 live birth which is unacceptably high. The major factors for the high maternal deaths include the overall poor health of women and lack of access to quality maternal health care services, particularly in rural areas. This survey has attempted to understand KAP on additional care during pregnancy. From the survey data it was concluded that majority of the respondents across all the components opined that pregnant women need additional care during pregnancy (R1:Com A-99.8 %, Com B-95.9% and Com C-92.9% R2: Com A- 97.7%, Com B 92.5% and Com C-99.4%). The positive opinion for the need of additional care in Com A and Com B has slightly lowered as compared to earlier round whereas; the knowledge among the respondents in Com C has increased.

In this context additional care refers to additional health care for mother and child, safe delivery etc. Reasons reported by the respondents from all three components who think additional care is needed during pregnancy are outlined in *table 7* below.

It was observed that the practice of providing maximum additional care during pregnancy for the good health of the child in Com B and Com C has lowered down between two rounds of the survey (R1: Com A- 67.6%, Com B- 83.6% and Com C- 81.2% R2: Com A-67.3%, Com B- 56.8% and Com C-53.4%). Similarly, the respondents from Com A have emphasized more of the additional care for the good health of the mother. As in last round, less importance was attached to safe delivery in this regard (R1: Com A-17%, Com B-17% and Com C-21.1% R2: Com A-11.6%, Com B-9.8% and Com C-19.5%). Even the importance for safe delivery was felt by less percent of the respondents as compared to earlier round.

Also, some of the types of additional care needed during pregnancy reported by the respondents were to take rest, to eat nutritious food and to avoid heavy work. *(Table 7)*

Table 7: Knowledge on Additional Care during Pregnancy

	Round 1			Round 2		
	COM A	**COM B**	**COM C**	**COM A**	**COM B**	**COM C**
Base : All	**520**	**318**	**322**	**520**	**320**	**320**
Have knowledge on need of additional care (%)	99.8	95.9	92.9	97.7	92.5	99.4
Importance of additional care						
Base : Those need additional care	**519**	**305**	**299**	**508**	**296**	**318**
For a good health of child (%)	67.6	83.6	81.2	67.3	56.8	53.4
To avoid serious problems (%)	58.6	45.6	30.8	47.2	38.5	67.9
For a good health of a mother (%)	45.3	60	72.6	63.8	57.8	53.5
For safe delivery (%)	17	17	21.1	11.6	9.8	19.5
Don't Know				-	0.7	3.2
Types of additional care						
Has to take rest (%)	71.5	76.1	77.3	96.7	84.1	68.5
Has to eat nutritious food (%)	71.1	79.3	93	70.5	64.2	46.2
Should avoid heavy work (%)	47.4	76.7	55.2	32.3	43.6	52.5
Should go for regular check-up (%)	31.8	15.4	32.8	27	24.3	45.3
Should avoid long journey (%)	19.8	36.1	5.4	14.6	3.7	31.1
Should take iron tablets (%)	19.7	15.7	13.4	15.4	13.9	21.1
Should avoid alcohol and smoking (%)	7.8	23.3	11.4	18.7	3.4	1.2
Take Albendazole (%)	-	-	-	1.4	0.7	0.6

Note: The percentages add up to more than 100 because of multiple responses

4.2 Knowledge on Antenatal Care (ANC) Check-Up During Pregnancy

Majority of the respondents from all three components opined that pregnant women need regular health check ups. Across the components, the knowledge on antenatal care during pregnancy has improved particularly in Com B (R1- 89.3% R2-93.4%)

In the first round, the repeatedly stated reason for the regular health check up during pregnancy was to confirm good health (R1: Com A: 98.1%, Com B: 96.1% and Com C: 98.7%). However, in the second round of the survey, the response from all three components has diversified into different reasons. This somewhat indicates that respondents are gaining knowledge that the regular health check ups are equally important and beneficial for various other reasons. In component A the most stated reasons were to take IFA supplementation (55.6%), to take TT injection (52.3%) and to confirm a good health (48.1%). Similarly the respondents from Com B felt its importance to confirm good health (76.9%) and to remain a healthy mother (43.5 %). Again in Com C, the most stated responses were to confirm good health (76.1%) and to know the status of the fetus (60.2%). *(Table 8)*

A considerable number of respondents mentioned that women need to go for a regular ANC check-up for 4 times during pregnancy (R1: Com A-48.4%, Com B- 32.7% and Com C- 42.5% R2: Com A-62.2%, Com B- 55.2% and Com C- 64.4%). *(Table 8).*

The proportion of the people who were still not clear about the frequency of ANC check up required during pregnancy has markably lowered in Com A and Com C as compared to first round of the survey.

Table 8: Knowledge on Antenatal Care Check-Up

	Round 1			Round 2		
	COM A	**COM B**	**COM C**	**COM A**	**COM B**	**COM C**
Base : All respondents	**520**	**318**	**322**	**520**	**320**	**320**
Knowledge on need of regular health check-up (%)	99.4	89.3	95	98.3	93.4	98.1
Importance of regular health checkup						
Base : Those who felt the need	**517**	**284**	**306**	**511**	**299**	**314**
To confirm good health (%)	91.8	96.1	98.7	48.1	76.9	76.1
To know the status of fetus (%)	36.4	39.8	34.3	14.7	8.7	60.2
To take Iron supplementation (%)	21.5	26.8	30.4	55.6	25.1	10.5
To remain a healthy mother (%)	11.6	2.8	2	25.4	43.5	14.3
To take TT injection (%)	10.3	17.3	21.6	52.3	8.4	18.8
For a good health of the baby (%)	4.3	1.1	0.7	-	-	-
To take Albendazole (%)	-	-	-	3.3	6.1	1.9
Don't Know (%)	-	-	-	1	4.0	4.5
Frequency of ANC check up						
01 Times (%)	0.2	0.4	-	1.8	2.0	-
02 Times (%)	5.0	3.9	0.7	3.7	4.0	2.2
03 Times (%)	13.2	18.3	10.1	17.8	16.7	6.7
04 Times (%)	48.4	32.7	41.5	62.2	55.2	64.4
05 Times (%)	8.1	13	17.3	5.9	4.7	8.0
06 Times (%)	5	6.7	5.2	-	0.3	2.9
07 Times (%)	0.2	1.1	2.3	-	-	0.3
08 Times (%)	0.4	-	-	-	-	0.3
09 Times and more (%)	0.8	9.9	0.3	0.6-	-	0.3
Don't Know/Can't Say (%)	18.8	14.1	22.5	8	17.1	14.9
Average number of times for ANC check up	4.01	4.61	4.32	**3.8**	**3.7**	**4.1**

Note: The percentages add up to more than 100 because of multiple responses

4.2.1 Place for ANC Check-Up

As in previous survey the respondents throughout the selected districts were asked about the place where they go for ANC check up. The survey data shows that still a larger group mostly visit sub-health post (R1: Com A- 77.3%, Com B- 42.6% and Com C-59.2% R2: 75%, Com B-54% and Com C-61%), hospital (R1: Com A- 32.9%, Com B- 41.2% and Com C- 49.7% R2: Com A-56%, Com B-32%, Com C 32%) and health post for antenatal check-up (R1-Com A-31.5%, Com B- 54.6% and Com C-36.6% R2: Com A 56%, Com B-43% and Com C 53%). *(Table 9)*.

Table 9: Place for ANC Check-Ups

	Round 1			Round 2		
	COM A	**COM B**	**COM C**	**COM A**	**COM B**	**COM C**
	517	**284**	**306**	**511**	**299**	**314**
Base : Those who feel the need	**%**	**%**	**%**	**%**	**%**	**%**
Sub-Health post	74	43	59	75	54	61
Hospital	33	41	50	56	32	32
Health post	32	55	37	36	43	53
Private Doctor/Clinic	9	1	14	24	2	7
FCHV	6	12	2	0	6	4
MCHW	3	6	11	4	4	2
Outreach Clinic(ORC)	4	3	6	3	3	18

Note: The percentages add up to more than 100 because of multiple responses

4.3 Awareness of IFA Supplementation

Table 10 illustrates the awareness of IFA supplementation among the pregnant and post partum women. It was observed that larger proportions of the respondents were aware of IFA supplementation throughout all three components (R2: Com A -97.9%, Com B- 90% and Com C-95.9%).

In previous round the awareness was observed slightly low in Com B but end line survey clearly shows that the awareness programs in these districts has created a very good impact (Com B: R1-78.9%, R2-90%).

No major differences on knowledge between pregnant women in the second and third trimester were observed *(Table 10)*.

Table 10: Awareness of IFA Supplementation during Pregnancy

	COM A	**COM B**				**COM C**			
		All	**Post Partum**	**2nd Trimester**	**3rd Trimester**	**All**	**Post Partum**	**2nd Trimester**	**3rd Trimester**
Round 1									
Base: All	**520**	**318**	**120**	**118**	**80**	**322**	**120**	**120**	**82**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Yes	95.6	78.9	82.5	76.3	77.5	95.3	93.3	97.5	95.1
No	4.4	21.1	17.5	23.7	22.5	4.7	6.7	2.5	4.9
Round 2									
Base: All	**520**	**320**	**120**	**120**	**80**	**320**	**120**	**122**	**78**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Yes	97.9	90.0	91.7	85.8	93.8	95.9	97.5	92.6	98.7
No	2.1	10.0	8.3	14.2	6.3	4.1	2.5	7.4	1.3

4.4 Knowledge on Importance of IFA Supplementation during Pregnant and Post Partum

Those who have heard of iron tablets and capsule were asked about the importance of taking iron supplements, most of the respondents from all components thought that iron tablets during pregnancy should be taken to increase blood (R1: Com A-79.1%: Com B-68.5%: Com C- 74.3%) (R2: Com A-90.2%, Com C 79.5% and Com C 73.9%). Knowledge among the women on importance of IFA supplementation during pregnancy in Com B seems to gradually increasing as compared to previous round.

Similarly, majority of the women those who were aware of IFA repeatedly mentioned that iron supplementation is equally important after delivery of the child (R1: Com A-81.8%: Com B-94.1: Com C- 90.3%) (R2: Com A- 94.5%, Com C 79.587.6% and Com C 87.7%).

Also, large number of the respondents mentioned that IFA supplement is necessary during pregnancy and post partum phase to ensure good health of the child. *(Table 11)*

Table 11: Knowledge on Importance of IFA Supplementation

	Round 1						Round 2					
	Com A		Com B		Com C		Com A		Com B		Com C	
	Pregnant Phase	Post Partum Phase	Pregnant Phase	Post Partum Phase	Pregnant Phase	Post Partum Phase	Pregnancy phase	Post partum phase	Pregnancy phase	Post partum phase	Pregnancy phase	Post partum phase
Base : Those heard /and taken iron	**497**	**308**	**251**	**34**	**307**	**72**	**509**	**326**	**288**	**89**	**307**	**57**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
To increase blood	79.1	81.8	68.5	94.1	74.3	90.3	90.6	94.5	79.5	87.6	73.9	87.7
To ensure good health of the child	45.5	47.7	50.2	55.9	43.6	43.1	42	48.2	39.2	34.8	41.4	36.8
Due to lack of iron and Vitamin C in regular meal	8.9	11.4	16.3	5.9	8.8	9.7	10.2	8.6	6.2	9	10.8	10.5
To avoid heavy bleeding during pregnancy or postpartum	11.3	22.7	13.5	29.4	5.9	11.1	3.9	7.4	1.4	4.5	3.6	10.5
Being Nutritious	-	-	-	-	-	-	24.8	-	1.7	-	1.6	-
Increase energy	6.2	6.8	0.8	2.9	0.7		-	15.3	-	-	-	-
Due to parasitic infestation	-	-	-	-	-	-	0.4	0.6	0.4	-	0.9	1.8
To improve health	-	-	-	-	-	-	0.2	0.6	1.7	-	2.6	3.5
No response	-	8.4	-	2.9	-	4.2	4.9	1.8	11.5	6.7	15.0	5.3

Note: The percentages add up to more than 100 because of multiple responses

4.5 Source of Information on Importance of IFA Supplementation

It was observed that the source to acquire knowledge on importance of IFA supplements during pregnancy and post partum in previous round was mostly from FCHVs for Component A. Similarly, a major source for Component B and Component C was Health post / health facilities. In second round the of survey, FCHVs were seen actively performing in Component A and Component B, whereas there involvement was very low in Com C. Majority of women in Component C get information on IFA from health post and health facility. (Table 12)

However, figures from Component B and Component C show that FCHVs play less importance in gaining knowledge about importance of IFA supplementation. Helath post/health facility and doctors/nurses and MCHWs seemed to acquire an important role in these components in terms of gaining knowledge on the same. Reach of radio is high in Component C (18%) as compared to 5.9% in Component B and 1.6% in Component A.

Table 12: Source of Information on Importance of IFA Supplementation

	Round 1						Round 2					
	Com A		Com B		Com C		Com A		Com B		Com C	
	Pregnant Phase	Post Partum Phase	Pregnant Phase	Post Partum Phase	Pregnant phase	Post Partum Phase	Pregnancy phase	Post partum phase	Pregnancy phase	Post partum phase	Pregnancy phase	Post partum phase
Base : Those who have knowledge/taken iron	**435**	**308**	**205**	**34**	**250**	**72**	**484**	**326**	**255**	**89**	**261**	**57**
	%	%	%	%	%	%	%	%	%	%	%	%
From FCHVs	77.5	79.9	46.3	29.4	24.8	15.3	53.9	58.9	68.6	67.4	26.1	24.6
From health post/health facility	40.7	34.1	57.1	50	49.2	40.3	58.1	52.4	42.0	40.4	80.1	73.7
From MCHWs	7.1	7.5	18.5	29.4	30.8	29.2	22.3	22.4	19.6	20.2	19.6	28.1
Doctor/nurse	9	6.2	22.9	32.4	26.8	23.6	13.2	22.7	19.2	23.6	10.7	14
From radio	-	-	-	-	-	-	1	1.5	3.5	1.1	16.1	7
From VHW	-	-	-	-	-	-	1	1.2	0.4	-	4.6	5.3
From friend's/relatives	-	-	-	-	-	-	1	0.3	3.5	2.2	8.8	7
From Neighbors	3.7		3.9		5.2	-	4.3	0.9	7.5	2.2	0.4	1.8
From family member	4.8	3.9	1.5	5.9	2.4	-	6.6	3.1	0.8	-	0.4	-
From television	-	-	-	-	-	-	0.6	0.6	-	-	2.3	-
Radio		1.6	-	5.9		18.1	0.4	-	1.2	1.1	-	-
VHWs			0.6			12.5	0.2	-	0.8	-	1.6	-
From newspaper	-	-	-	-	-	-	0.2	-	-	-	0.4	-

Note: The percentages add up to more than 100 because of multiple responses

4.6 Awareness of Vitamin A supplementation

4.6.1 Awareness of Vitamin A

It was observed that well over half of the total post partum women were aware of Vitamin A. In both rounds of the survey, awareness was significantly high[21] in component C (R1: 81.7%, R2- 80.8%) as compared to component A (R1-59.4%, R2-73.5%) and Com B (R1-51.7%, R2-64.2%). In regards to component A and component B, after implementing the program awareness of vitamin A supplementation has noticeably gone up.

Table 13: Awareness of Vitamin A

	Round 1			Round 2		
	COM A	COM B	COM C	COM A	COM B	COM C
Base : All respondents	**520**	**120**	**120**	**520**	**120**	**120**
	%	%	%	%	%	%
Yes	59.4	51.7	81.7	73.5	64.2	80.8
No	40.6	48.3	18.3	26.5	35.8	19.2

[21] Chi Square test at 5% confidence level (between B and C p=0.007)

Chapter 5: Practice and Utilization

5.1 Practice of Additional Care During Pregnancy

Majority of the respondents from all three components mentioned that they had taken additional care during pregnancy (R1:Com A-95.0%, Com B-71.1% and Com C-88.5%)(R2: Com A-93.1%, Com B-66.9%, Com C- 89.7%).Across all the components, the practice of additional care during pregnancy was high[22] in Com A *(Table 14).*

As mentioned earlier in table 7, almost all of the respondents in both rounds of the survey were in a view that additional care during pregnancy is very much essential but on further probing about their practice of additional care during pregnancy, the proportion of the respondents taking additional care was significantly low in Com B (R1: knowledge-95.9%, practice- 71.7% R2: knowledge-92.5%, practice-66.9%)

In response to type of additional care they had taken during pregnancy, a large majority of them (R1: Com A-76.5%, Com B-82.3% and Com C-93.7% R2:Com A-87.6%, Com B- 74.3%, Com C- 55.7%) mentioned that they had taken adequate amount of nutritious food. In previous round it was highest among women from Com C (93.7%) as compared to other components however in the latest survey taking this type of care has been followed more by the women from Com A (87.6%). Majority of them had also taken proper rest and had avoided carrying heavy things *(Table 14)*.

Table 14: Practice of Additional Care during Pregnancy

	Round 1			Round 2		
	Com A	**Com B**	**Com C**	**COM A**	**COM B**	**COM C**
Base : All	**520**	**318**	**322**	**520**	**320**	**320**
Additional care performed (%)	95.0	71.1	88.5	93.1	66.9	89.7
Types of additional care performed						
Base : Those who performed	**494**	**226**	**285**	**484**	**214**	**287**
Eat nutritious food (%)	76.5	82.3	93.7	87.6	74.3	55.7
Took rest (%)	51.8	61.5	67.4	67.6	71.0	40.4
Avoided carrying heavy things (%)	40.7	61.1	46.7	31.8	40.6	55.4
Went for regular check-up (%)	35.6	33.2	48.4	40.3	29.0	57.8
Eat additional food than as regular (%)	23.5	15.9	13.7	11	15.9	12.5
Avoid smoking (%)	-	-	-	11	0.9	1.1
Avoided long journeys (%)	5.1	10.2	2.8	2.9	2.3	23.7
Avoid alcohol (%)	-	-	-	8.7	-	0.4
Avoided alcohol and smoking (%)	4.6	34.5	5.3	-	-	-
Eat regular meal as usual only (%)	-	-	-	5.8	0.9	12.9
Eat less than usual diet (%)	-	-	-	1.4	1.8	2.1
Take IFA supplementation regularly (%)	-	-	-	0.4	-	2.1

****Note: The percentages add up to more than 100 because of multiple responses***

5.2 Practice of ANC Check-Up

An overwhelming majority[23] of 92.9 percent of the respondents of Com A, 78.1 percent of Com B and 85.6 percent from Component C mentioned that they had got ANC check-up during pregnancy. No major difference in the practice on ANC check up in Component A and Component C was observed as compared to last round. In the line of Component B, slightly more number of the women were found taking ANC check up.*(Table 15).*

[22] Chi square test at 5% significant level (between A and B, p= 0.000) (between B and C, p= 0.000)
[23] Chi square test at 5% significant level (between A and B, p= 0.003)

When the pregnant and post partum women were asked about the place where they had visited for antenatal check up, it was observed that most of them (Com A: 66.6%, Com B: 43.5% and Com C: 50.0% R2: Com A-64.4%, Com B- 50.8%. Com C-52.9%) had visited sub-health post for antenatal check-up.

Other reported places where they had visited for antenatal check-up were hospitals, health posts, FCHVs, ORC, Private Doctors/Clinics, MCHWs, VHW and pharmacy. Proportion of respondents visiting health post for ANC checkup was highest from Com B – 41.1% in previous round but the survey data in the second round shows that the proportion of respondents now has increased in component C (36.1%) as compared to other components.(Table 15).

Table 15: Practice of ANC Check-Up

	Round 1			Round 2		
	COM A	**Com B**	**Com C**	**COM A**	**COM B**	**COM C**
Base : All	**520**	**318**	**322**	**520**	**320**	**320**
Practice of ANC Check up during pregnancy (%)	92.1	65.7	85.7	92.9	78.2	85.6
Places visited for ANC check up						
Base : Those went for check up	**479**	**209**	**276**	**483**	**250**	**274**
Sub-Health post (%)	66.6	43.5	50.0	64.4	50.8	52.9
Hospital (%)	24.0	23.4	28.6	12.4	25.2	18.6
Health post (%)	21.7	41.1	22.8	19.9	29.2	36.1
FCHVs (%)	7.3	4.8	1.8	0.2	1.6	0.7
Outreach Clinic (ORC) (%)	1.7	1.9	2.5	1.7	1.2	13.5
Private Doctor/Clinic (%)	1.5	0.5	8	3.9	2.8	5.8
MCHW (%)	1.3	2.4	7.6	7	4.4	1.4
VHW (%)				-	-	0.7
Pharmacy (%)				-	-	0.4

****Note: The percentages add up to more than 100 because of multiple responses***

On an average, respondents from Component A had taken ANC check-up for 3.5 times, respondents from Component B had taken for 2.3 times and respondents from Component C had taken for 3.1 times. Across the three components, the average number of times the respondents have taken ANC check up was comparatively less in Com B. The data also shows that higher women population from all components had their first antenatal check up during 91 to 120 days during their pregnancy.*(Table 16).*

Table 16: Frequency of ANC Check-Up

	Round 1			Round 2		
	Com A	**Com B**	**Com C**	**Com A**	**Com B**	**Com C**
Base : Those went for check up	**479**	**209**	**276**	**483**	**250**	**274**
	%	**%**	**%**	**%**	**%**	**%**
Frequency of ANC checkup						
01 Times	9.6	23.4	16.7	5.8	38.0	19.0
02 Times	14.4	29.7	25	13.9	22.0	23.7
03 Times	21.1	24.4	21.4	24.4	18.0	17.5
04 Times	31.1	12.9	16.3	46.4	18.4	27.7
05 Times	12.1	5.7	9.8	8.3	2.4	8.4
06 Times	6.5	2.9	5.8	0.4	0.4	2.2
07 Times	2.3	0.5	3.6	0.2	0.4	0.7
08 Times	1.7	0.5	0.4	-	-	0.4
09 Times	0.8	-	0.4	-	-	0.4
10 Times	0.4	-	0.4	-	0.4	-

12 Times	-	-	0.4	0.4	-	-
13 Times				0.2	-	-
Average	**3.7**	**2.6**	**3.2**	**3.5**	**2.3**	**3.1**
First ANC checkup received						
1-10 days	-	-	0.4			
11-20 days	0.4	1	-			
21-30 days	1.9	1.9	1.1	-	-	2.2
31-45 days	0.6	-	5.1	-	0.4	1.5
46-60 days	5.8	8.1	1.8	-	0.4	3.6
61-90 days	16.9	34.9	13.8	12	19.2	8.8
91-120 days	38	30.1	62	67.1	68.0	62.1
120-150 days	13.8	13.9	9.4	13.3	6.0	15.4
151-180 days	9.2	2.9	5.8	5.4	3.2	4.0
181-210 days	2.9	4.8	0.4	1	1.2	2.2
211-240 days	4.2	0.5	0.4	0.8	1.2	0.4
240 days+	-	1.4	-	0.4	0.4	-

5.3 Discrepancy on Knowledge and Practice

5.3.1 Additional Care During Pregnancy

The purpose of the survey was also to identify the gaps between knowledge and practice on various things related to care during pregnancy and post partum stage. During this investigation some questions were asked to explore into their knowledge and practice on additional care during pregnancy. It was observed that respondents from all components have adequate knowledge about the additional care needed during pregnancy (R1: Com A-100%, Com B-96.0%, Com C (93.0% and R2: Com A -97.7%, Com B-92.5% and Com C-99.4%).

As far as practice of additional care during pregnancy is concerned, still a high percent of the respondents from Com A (R1-95%, R2-93.1%) and Com C (R1-89%, R2-89.7%) had taken additional care during their pregnancy as compared to Com B (R1-71%, R2-66.9%). The highest discrepancy between knowledge and practice can be clearly seen from Com B (R1-25%, R2-25.6%).

Table 17: Knowledge and Practice

	Round 1			Round 2		
	COM A	**COM B**	**COM C**	**COM A**	**COM B**	**COM C**
Base : All	**520**	**318**	**322**	**520**	**320**	**320**
	%	**%**	**%**	**%**	**%**	**%**
Knowledge	100.0	96.0	93.0	97.7	92.5	99.4
Practice	95.0	71.0	89.0	93.1	66.9	89.7
Discrepancy	5	25	4	4.6	25.6	9.7

Breakup by Districts

Discrepancy between knowledge and practice of additional care during pregnancy has been further analyzed from district level. In previous round the practice of additional care during pregnancy among the study population of Kalikot was observed to be very low as compared to pregnant and post partum women from other selected districts. It is also important to notice that the discrepancy measured in the second round for Kalikot has sweepingly lowered down (R1-48%, R2-4%).

Correspondingly in the second round, the deepest gap between knowledge and practice was experienced in Dolpa district (61%). 100 percent of the total respondents from Dolpa had knowledge about additional care; however, only 39% were actually practicing it. *(Table 18).*

Table 18: Knowledge and Practice (by district)

Round 1	COMA	Kailali	Bhajang	Doti	Sihara	Sunsari	COM B	Rolpa	Accham	Kalikot	Jajarkot	Rukum	COM C	Bhojpur	Illam	Dhankuta	Therathum	Taplejung
Base : All	520	154	43	58	159	106	318	39	107	40	67	65	322	78	92	30	40	82
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Knowledge	100	100	100	100	99	100	96	97	100	88	100	89	93	100	90	100	100	83
Practice	95	93	91	86	99	98	71	82	79	40	61	80	89	99	90	77	95	78
Discrepancy	5	7	9	14	0	2	25	15	21	48	39	9	4	1	0	23	5	5
Round 2	**Com A**	Rupandehi	Dailekh	Darchula	Saptari	Dolpa	**Com B**	Rolpa	Accham	Kalikot	Jajarkot	Rukum	**Com C**	Bhojpur	Illam	Dhankuta	Terhathum	Taplejung
Base : All	520	143	86	48	225	18	320	71	77	26	81	65	320	97	103	40	41	39
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Knowledge	98	100	94	85	100	100	93	97	86	73	96	99	99	98	100	100	100	100
Practice	93	97	91	88	97	39	67	48	82	69	54	85	90	94	90	85	98	74
Discrepancy	5	4	4	-2	3	61	26	49	4	4	42	14	10	4	10	15	2	26

5.3.2 Knowledge and Practice of ANC Check-Up

When enquired about knowledge and practice of pregnant and post partum women, it was observed that majority of the respondents from all three components had sufficient knowledge on Antenatal check-up during pregnancy *(Figure 4).*

In first round of the survey, the data showed that majority of the pregnant and post partum women from component A and C had undergone antenatal check-up, whereas, only over a half of them for Component B had antenatal check up during pregnancy. The recent scenario on Knowledge from second round of survey shows that the awareness level of undergoing antenatal check up during pregnancy has gradually increased in Component B and Component C. *(Table 19).* Still the discrepancy between knowledge and practice on ANC check-up was highest from Com B but the practice of undergoing ANC check up seems growing as compared to earlier round.

Table 19: Knowledge and Practice of ANC Check up

	Round 1			Round 2		
	Com A	**Com B**	**Com C**	**Com A**	**Com B**	**Com C**
Base: All	**520**	**320**	**320**	**520**	**320**	**320**
	%	**%**	**%**	**%**	**%**	**%**
Knowledge of ANC	99.4	89.3	95	98.3	93.4	98.1
Practice of ANC	92.1	65.7	85.7	92.9	78.1	85.6

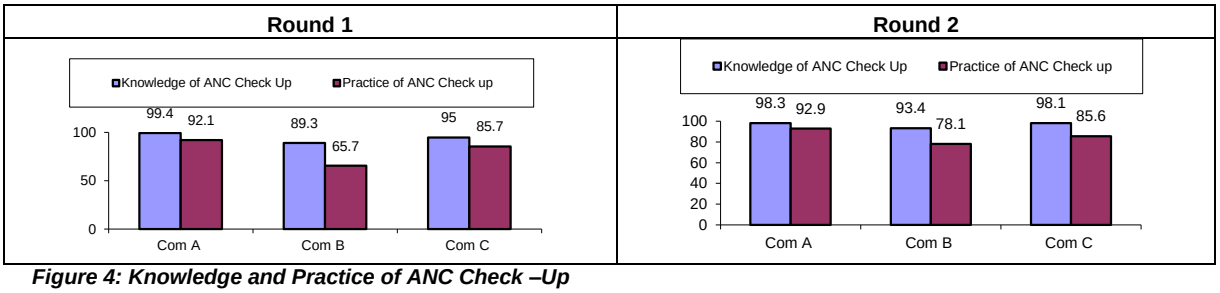


Figure 4: Knowledge and Practice of ANC Check –Up

5.3.3 Frequency of ANC Check-Up

Over half of the respondents from all three components mentioned that pregnant women need four times of ANC check up throughout pregnancy period. (Com A- 61%, Com B-54%, Com C-75%). Also the government guideline in Nepal under Safe Motherhood program recommends at least four ANC check ups during pregnancy.

Regarding the practice, altogether 43.1 percent of the respondents from Component A, 30.0 percent of from component B and 49.1 percent from Component C had four antenatal check-ups during their pregnancy. The data was analyzed for post partum women only because pregnant women were at different stages of pregnancy.

Table 20: Frequency of ANC Check-Up

	Com A		Com B		Com C	
	Knowledge	**Practice**	**Knowledge**	**Practice**	**Knowledge**	**Practice**
Base: All post partum	**520**	**520**	**120**	**120**	**120**	**120**
	%	**%**	**%**	**%**	**%**	**%**
00 Times	1.7	7.1	6.7	13.3	1.7	8.3
01 Times	1.8	5.4	3.4	15.0	-	3.3
02 Times	3.6	12.9	1.7	17.5	1.7	6.7
03 Times	17.5	22.7	15.9	20.0	8.4	12.5
04 Times	61.1	43.1	54.1	30.0	75.0	49.1
05 Times	5.8	7.7	3.4	4.2	5.8	15.0
06 Times	-	0.4	0.8	-	-	4.1
07 Times	-	0.2	-	-	-	-
14 Times	0.6	0.4	-	-	-	-
15 Times	-	0.2	-	-	-	-
Could not respond	7.9	-	14.2	-	7.5	-

5.4 IFA Coverage

Table 21 shows that across all the components IFA consumption among post partum during pregnancy was high. IFA coverage in Component A was highest (92.9%) followed by Component C (87.5%) and Component B (83.3%). While comparing with previous round data, ratio of IFA coverage among post partum women during their pregnancy in Component B has visibly increased whereas in other two components no such major differences was observed (R1: Com A- 90%, Com B- 65% and Com C- 86%). From this we can conclude that the implementation of IMNMP in Com B have proved effective.

It was also noted that same post partum mothers in terms of taking IFA supplements, had made some negligence after giving birth. Intake of IFA supplement was observed to be lowest among respondents from Com C.

Similarly, IFA coverage in Component B and Component C among pregnant women was observed high during their third trimester of pregnancy period.

It is also interesting to note that there was a very high coverage in component C and the second round data shows no foremost differences in IFA coverage.

Table 21: IFA Coverage

			Base : All	**Round 1**	**Round 2**
Com A	**Post partum**	**Pregnancy status**	**520**	90.0%	92.9 %
		Post partum Status	**520**	59.0%	62.7%
Com B	**Post partum**	**Pregnancy status**	**120**	65.0%	83.3%
		Post Partum status	**120**	28.3%	74.2%
	Pregnant	**2nd Trimester**	**118**	56.0%	67.5%

		3rd Trimester	**80**	61.0%	80.0%
Com C	**Post partum**	**Pregnancy status**	**120**	86.0%	87.5%
		Post Partum status	**120**	60.0%	47.5%
	Pregnant	**2nd Trimester**	**120**	70.0%	63.1%
		3rd Trimester	**82**	82.0%	82.0%

IFA coverage was further analyzed by the education level of the respondents. The coverage during pregnancy among literate across all components was at least 87%. Same thing among illiterate was highest in Com A (91.5%) followed by Com C (81.3%) and Com B (78.2%). While comparing with previous round, no major changes were observed in all components among literate. However, IFA coverage has increased in all components for illiterate. The sweeping change in IFA coverage was observed in Com B (R1-55.4%, R2-78.2% and Com C (R1-57.7%, R2-81.3%).

Similarly the IFA coverage during post partum among literate in Com A, B and C were 77%, 55% and 42% respectively. The coverage among the same group in Com A and Com B was similar to previous round whereas, the IFA consumption has declined in Com C (R1-70%, R2-42%). IFA consumption among illiterate has increased in Com A and Com B. The sever change in IFA coverage during post partum among illiterate in Com B was found to be the major factor influenced by IMNMP program. None of the illiterate has taken IFA during post partum in Com C.

Table 21a: IFA Coverage by Education level among Post Partum Women

		Com A		**Com B**		**Com C**	
		illiterate	**Literate**	**illiterate**	**Literate**	**illiterate**	**Literate**
Round 1	**Base : All resp**	**322**	**198**	**83**	**37**	**26**	**94**
	Pregnant Phase	84.8	97.4	55.4	86.5	57.7	93.6
	Post Partum Phase	49.4	74.0	15.7	58.0	23.1	70.0
Round 2	**Base : All resp**	**318**	**202**	**69**	**51**	**16**	**104**
	Pregnancy Phase	91.5	97.3	78.2	87.4	81.3	91.5
	Post partum Phase	56.6	77.16	69.6	54.5	0	42

IFA coverage among literate pregnant was at least 85% in both components B and C. The coverage has remarkably increased in both components among illiterate between two rounds of the survey.

Table 21.b :IFA Coverage by Education level among Pregnant Women

	Com B		**Com C**	
	illiterate	**Literate**	**illiterate**	**Literate**
Base : All resp	**137**	**61**	**38**	**164**
Round 1	51.1	73.7	44.7	81.7
Base : All resp	**121**	**79**	**31**	**169**
Round 2	67.7	85.4	78.2	78.3

5.5 Reasons for not taking IFA Supplementation

Post partum mothers who had not taken IFA supplementation were asked about the reasons for not taking IFA supplements during pregnancy and post partum. Reported reasons for not taking IFA tablets are given in *table 22* below where it clearly shows that during pregnancy most of the women did not take IFA supplementation because they had experienced its side effect, they didn't like the taste, health facilities were far to access, they were not recommended and were not aware of this.

However in the previous round, lack of awareness was playing a major role in this regards. Lack of awareness was highest in Com B – 60.3%, followed by Com A – 48.4% and Com C – 20.7% which in second round has conquer to 11.5 percent in Com A, 16.3 percent in Com B and 16.4 percent in Com C. But still a small chunk of the people mentioned that they were not recommended for taking IFA which could be taken as an important reason for not taking IFA during pregnancy (R2: Com A-11.4%, Com B-18.6% and Com C-17.5%).

A considerable proportion of respondents from Com A mentioned that they had side effects after taking IFA supplements (30.8%). Similarly 21.3 percent from Com C stated that they did not like its taste.

Lack of awareness was still a major reason for not IFA during post partum period. Lack of awareness was high in Com C (46.8%) compared to Com B (33.3%) and Com A (28.9%). Also, high percent of the respondents through out all three components were not recommended for IFA after giving birth. (Com A-17.5%, Com B-43.3% and Com C-48.3%)

Table 20: Reason for Not Taking IFA Supplementation

Round 2	COM A		COM B		COM C	
	Pregnancy phase	Post partum phase	Pregnancy phase	Post partum phase	Pregnancy phase	Post partum phase
Base: Post Partum women who have not taken IFA	**26**	**194**	**43**	**30**	**61**	**62**
	%	**%**	**%**	**%**	**%**	**%**
Was not aware of its need	11.5	28.9	16.3	33.3	16.4	46.8
Was not recommended by anybody	11.4	17.5	18.6	43.3	17.5	48.3
Health facilities are far away	11.5	3.1	13.9	30	18.1	6.5
IFA was not available in health facilities	3.8	1.5	2.3	13.3	4.9	3.2
Occurred side effect	30.8	7.7	4.6	3.3	4.9	3.2
Did not like the taste	7.7	17.5	11.6	-	21.3	8.1
Thinking of delivering weighted baby	3.8	-	16.3	-	4.9	-
Unable to collect medicine at time	3.8	16	4.6	3.3	4.9	9.7
Did not visited doctor	7.7	-	13.9	-	4.9	-
Family member asked not to take any medicine	7.7	1	4.7	6.7	1.6	1.6
Thinking of having a baby girl	7.7	1	-	-	-	-
COULD NOT RESPOND	-	-	7.0	3.3	3.3	-

Note: The percentages add up to more than 100 because of multiple responses

5.6 Recommendations for IFA supplementation during pregnancy and postpartum

Most of the women were recommended to take IFA supplementation during their pregnancy (R2: Com A-96.9%, Com B-83.7%, Com C–86.8%). The activity of recommending IFA to post partum women was comparably less to pregnant (R2: Com A -81%, Com B- 80%, Com C-60%. However the trend of recommending women during post partum phase mainly in Com B has remarkably progressed during the time of two rounds of survey (R1: Com A -75.2%, Com B-44.2%, Com C- 70%)

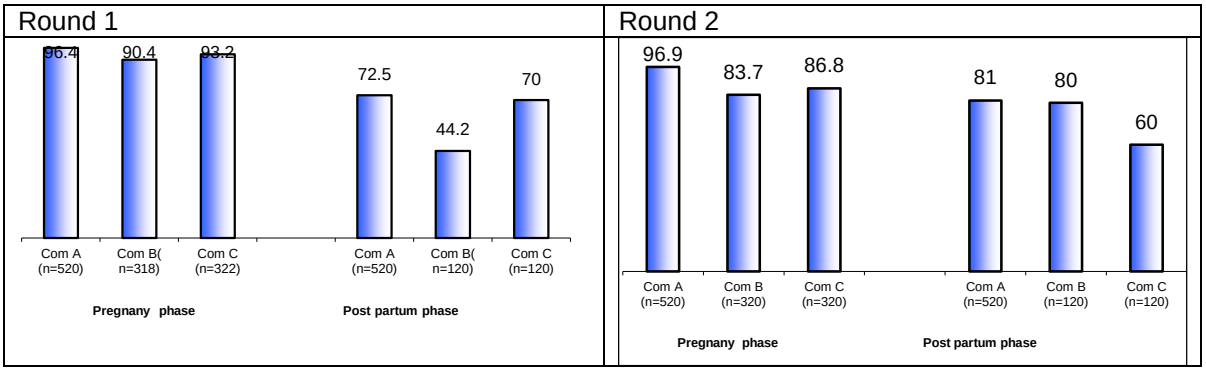


Figure 5: IFA Supplementation Recommended During Pregnancy/Post Partum

While analyzing from district level, it was observed that the proportion of pregnant women who received recommendation for taking IFA supplementation was similar in all the districts. Kalikot, where comparatively fewer women were seen to have received such recommendations during the previous

enumeration, was seen to have made a major progress. Entire pregnant respondents have received recommendations on IFA supplementation in Dailekh Sunsari, Kalikot and Jajarkot districts. Recommendation for IFA supplementation in Rolpa and Bhojpur, on the other hand, seemed to have slightly declined than during the previous enumeration.

Table 21: IFA Supplementation Recommended during Pregnancy phase (Breakup by Districts)

	Round 1			Round 2		
	Districts	**Base : Those aware of IFA**	**IFA recommended %**	**Districts**	**Base : Those aware of IFA**	**IFA recommended %**
Component A	Kailali	**154**	90	Rupendehi	**138**	99
	Bhajang	**43**	98	Dailekh	**84**	100
	Doti	**58**	97	Darchula	**47**	98
	Siraha	**159**	100	Saptari	**222**	99
	Sunsari	**106**	100	Dolpa	**18**	100
Component B	Rolpa	**39**	97	Rolpa	**55**	84
	Accham	**107**	92	Accham	**64**	92
	Kalikot	**40**	72	Kalikot	**26**	100
	Jajarkot	**67**	89	Jajarkot	**81**	100
	Rukum	**65**	94	Rukum	**62**	90
Component C	Bhojpur	**78**	97	Bhojpur	**94**	89
	Illam	**92**	95	Illam	**100**	89
	Dhankuta	**30**	93	Dhankuta	**37**	92
	Therathum	**40**	97	Therathum	**41**	95
	Taplejung	**82**	85	Taplejung	**35**	92

5.7 IFA Supplementation Recommended By

During this study it was revealed that pregnant and post partum women received recommendation to take IFA supplementation primarily from health post/health facilities, FCHVs, MCHWs, and doctors/nurses. Compared to the previous enumeration, health posts/health facilities seemed more involved in giving out recommendation to pregnant and post partum women in Com A and Com C, whereas FCHVs seemed more active in Com B. FCHVs in Com C were still relatively less active in reaching out to respective women for recommending IFA supplementation. *(Table 24)*

Table 22: IFA Supplementation Recommended By

	COM A		COM B		COM C	
	Pregnancy phase	**Post partum phase**	**Pregnancy phase**	**Post partum phase**	**Pregnancy phase**	**Post partum phase**
Base: Those who have been recommended to take IFA	**504**	**421**	**268**	**96**	**278**	**72**
	%	**%**	**%**	**%**	**%**	**%**
From health post/health facility	62.3	39.4	38.1	35.4	79.5	62.5
From FCHV	57.3	51.3	69.0	56.3	20.9	26.4
From MCHW	26.8	22.1	18.3	14.6	21.2	19.4
Doctor/nurse	12.9	23.8	17.2	25	10.8	18.1
From VHW	1.4	1.4	1.1	-	8.3	5.6
From radio	0.6	-	1.5	-	8.3	1.4
From television	0.6	-	-	-	1.5	-
From family member	5	2.1	0.8	-	0.4	-
From friend's/relatives	0.4	-	1.5	1	5.4	-

From neighbors	1.8	0.5	4.8	1	0.4	-
From posters/pamphlets	0.2	-	-	-	-	-
From newspapers	0.2	-	-	-	-	-
From teachers	-	-	0.4	-	0.4	-
HOSPITAL	-	-	-	-	1.8	2.8
Could not respond	-	0.2	-	-	-	-

Note: The percentages add up to more than 100 because of multiple responses

5.8 Source of IFA tablets

To identify source of IFA supplementation being used by pregnant and post partum mothers, on site observation was carried out by the team members. The collected data revealed that majority of the pregnant and post partum women were found to be taking IFA that had been distributed by government and they were receiving IFA supplements free of cost *(Table 25)*. The situation was similar during the previous study also.

Table 25: IFA Supplementation Acquired From

	Round 1					Round 2				
	Com A	Com B		Com C		Com A	Com B		Com C	
	Post Partum	Post Partum	Pregnant	Post Partum	Pregnant	Post Partum	Post Partum	Pregnant	Post Partum	Pregnant
Base : Who have taken IFA	**308**	**34**	**115**	**72**	**151**	**326**	**89**	**145**	**57**	**141**
	%	%	%	%	%	%	%		%	
IFA tablets distributed by Government	87.7	100	99.1	98.6	92.1	93.3	86.5	93.1	86	95.0
Unable to show medicine	9.7			-		1.8	13.5	5.5	14	0.7
Bought it out from pharmacy/Clinic/ medical	2.6	-	0.9	1.4	7.3	4.9	-	1.4	-	4.2
Hospital	-	-	-	-	0.7					

Again, while inquiring about the place from where they had received IFA tablets, majority of the respondents stated Sub health post, health post (Com A-57.8%, Com B-24.9% and Com C -49.2%), and FCHVs (Com A-17.2% and Com B 43.7%) as the key sources for availing IFA supplements. FCHVs in Com B seemed most active in this task whereas their involvement was negligible in Com C. FCHVs involvement hugely cut out in Com A and Com C as compared to earlier round study.

Table 23: Source for IFA tablet

	Round 1			Round 2		
Pregnant	**Com A**	**Com B**	**Com C**	**Com A**	**Com B**	**Com C**
Base: Those who have taken IFA	**466**	**193**	**254**	**483**	**245**	**246**
	%	%	%	%	%	%
FCHVs	59.7	19.7	6.7	17.2	43.7	2.5
Sub-Health post	33	35.2	39.8	57.8	24.9	49.2
Health post	9.2	37.8	17.7	14.9	15.5	30.1
Hospital	6.7	13	23.2	6.8	16.3	9.3
MCHWs	0.6	2.1	12.6	0.8	5.7	3.3
Private Doctor/Clinic	0.2	-	5.1	3.1	0.8	2.0
Pharmacy/ Medical				1.9	-	1.6
Outreach Clinic (ORC)	-	-	1.6	1.2	0.4	4.5
VHWs	-	1.6	2.8	-	-	0.4

Note: The percentages add up to more than 100 because of multiple responses

5.9 Packaging of IFA supplementation received

Similar in previous enumeration, a large proportion of respondents had received IFA supplementation packed in a plastic bottle. Only in this round, equally big proportion of respondents in all three components reported that they have received IFA supplementation in strip/capsules form. This option of strip/capsule was not widely available during previous enumeration. It was also found that the use of other forms of packaging like glass bottle, or paper wrapping had declined. *(Table 27*)

Table 24: Packaging of IFA Tablets received during pregnancy

	Round 1			Round 2		
	Com A	**Com B**	**Com C**	**Com A**	**Com B**	**Com C**
Base : Those who have taken IFA during pregnancy	**466**	**193**	**254**	**483**	**245**	**246**
	%	**%**	**%**	**%**	**%**	**%**
Packed in a plastic bottle	67.8	37.3	78.0	51.1	69.4	35.8
STRIP/CAPSULE	-	-	-	41.4	29.4	49.2
Wrapped in ordinary paper	18.7	23.8	14.2	10.1	4.9	9.7
Glass bottle	12.2	25.9	1.2			
Straight loose	0.4	13.0	0.4	0.2	-	-
Wrapped in a aluminum foil	1.3	-	6.7	0.6	-	0.8
In bottle (liquid)	0.6	0.5	0.4	-	-	4.9

5.10 Start of IFA Intake

It was seen that most of the pregnant women had started taking IFA between 90 to 120 days of their pregnancy. The proportion of the respondents those who have started taking IFA from 2nd trimester(91 days) of their pregnancy was high in Component B (82%) followed by Component A (73.7%) and Component C (71.5%). The survey data also shows that pregnant women had started taking IFA supplements lately as compared to respective women in previous round. In previous round women were seen taking IFA from second month of their pregnancy period.

Similarly, among post partum women, most of the respondents had started taking IFA within first 15 days of delivery.

Table 25: Start of IFA Intake

	Round 1			Round 2		
	COM A	**COM B**	**COM C**	**COM A**	**COM B**	**COM C**
During pregnancy						
Base : Those heard of IFA supplementation	**497**	**251**	**307**	**483**	**245**	**246**
	%	**%**	**%**	**%**	**%**	**%**
1-30 days	0.6	-	1.2	-	-	-
31-60 days	1.7	2.1	1.2	-	-	-
61-90 days	11.2	24.4	5.9	5.0	4.0	2.9
91-120 days	61.2	50.3	68.9	73.7	82.0	72.3
120-150 days	14.8	13.5	14.2	13.9	8.0	18.1
151-180 days	7.5	3.6	7.5	7.5	6.0	6.7
181-210 days	1.9	4.1	0.8	-	-	-
211-240 days	1.1	0.5	0.4	-	-	-
240 days+	-	1.6	-		-	-
Average	**121**	**118**	**105**	**113**	**105**	**113**
During Post Partum						
Base : Those who have started taking IFA	**308**	**34**	**72**	**326**	**89**	**57**
	%	**%**	**%**	**%**	**%**	**%**

1-15 days	99.4	91.1	97.2	98.8	97.8	96.5
16-30 days	0.6	2.9	2.8	0.9	2.2	3.5
31-45 days	-	2.9	-	0.3	-	-
90 days +	-	2.9	-			

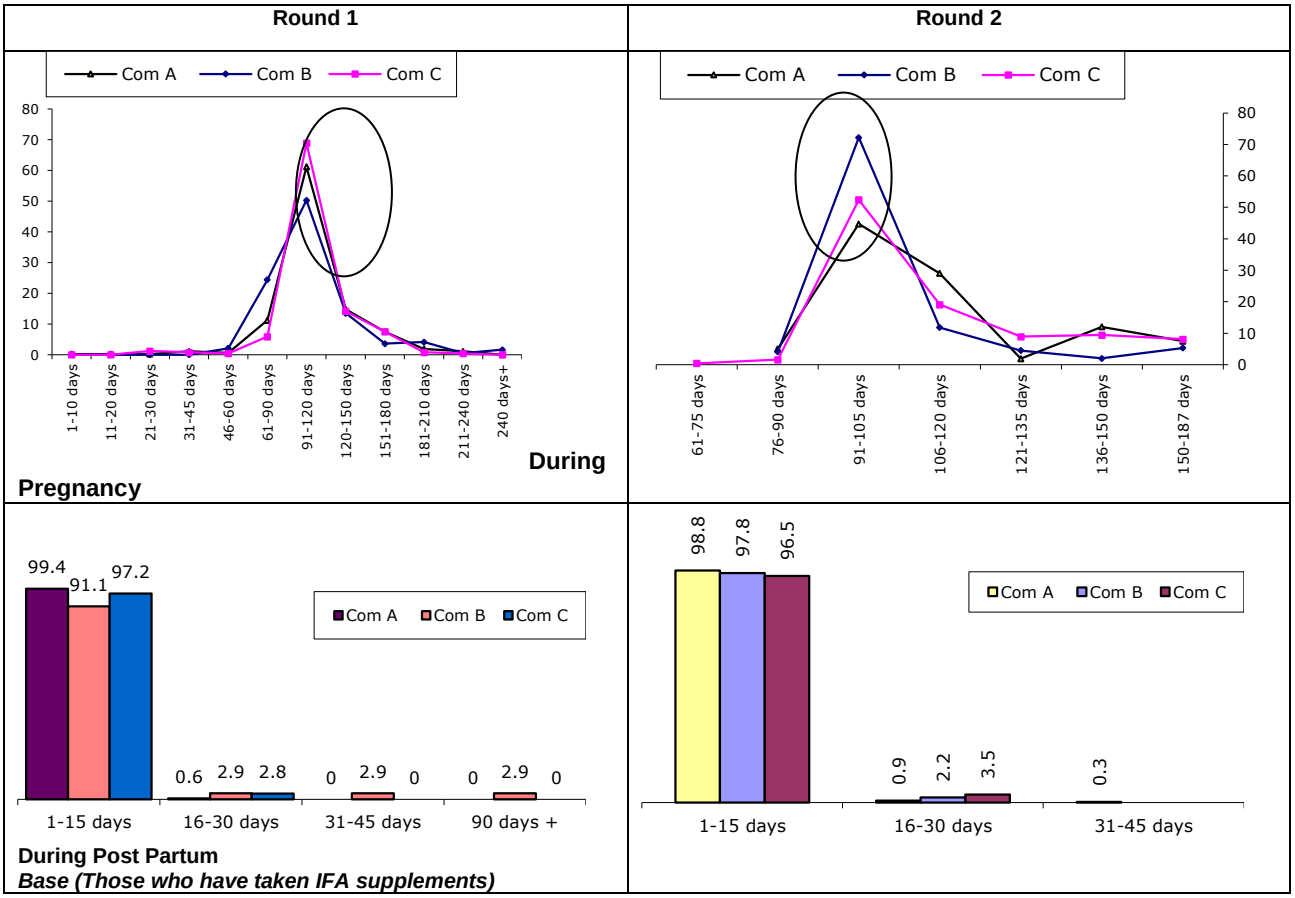


Figure 6: Start of IFA Intake

5.11 Storage of IFA Tablets

Places where the pregnant and post partum women store their IFA supplementation are outlined in *table 29* below. Shelf, table, and bag were noted to be the most convenient place for storage.

Table 29: Storage of IFA Tablets

	Round 1				Round 2			
	All	**Com A**	**Com B**	**Com C**	**All**	**COM A**	**COM B**	**COM C**
Base : Who have taken IFA during pregnancy	**913**	**466**	**193**	**254**	**974**	**483**	**245**	**246**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Store on shelf (Takhta)	37.3	40.6	54.9	18.1	27.5	31.9	24.5	21.9
On the table	26.9	29.6	9.3	35.4	21.9	26.1	10.6	24.8
Inside or on top of a cabinet	12.8	9.7	7.3	22.8	6.8	4.1	4.1	14.6
Inside a Jhola (bag)	12	8.6	16.1	15.4	22.2	22.2	22.4	22.0
Inside trunk	1.5	1.1	2.6	1.6	10.7	10.4	19.2	2.8
Under the pillow	3.9	3.6	4.1	4.3	6.3	2.9	11.8	7.3
Under the bed	2	2.8	1.6	0.8	3.3	1.2	6.5	4.1
Store room	-	-	-	-	0.3	0.2	0.0	0.8
Inside a Bhakari	-	-	-	-	0.3	0.2	0.0	0.8

Above window pane	-	-	-	-	0.4	0	1.2	0.4
Could not respond	-	-	-	-	0.2	0	0.0	0.8

5.12 Oral Instruction for Taking IFA Supplementation

Majority (above 95% in average) of respondents, as during the previous enumeration, stated that they had been provided with oral instructions on the procedure of taking IFA tablets during pregnancy and post partum period. Further to this, they were also asked about the type of instruction they had received. In response to this question, a large majority stated that they were advised to take one dose of IFA tablet at night after meal, or take only one tablet a day. Compared to previous enumeration, lesser women were saying that the instructions they received included not taking IFA pills without eating something. Confusion regarding the dose still seemed to exist. 9.5% of women in pregnancy phase from Com C reported to have been instructed for taking IFA pills twice a day. *(Table 30)*

Table 30: Oral Instruction for Taking IFA Supplementation

	Round 1						Round 2					
	Com A		Com B		Com C		Com A		Com B		Com C	
	Pregnancy Phase	Post Partum phase	Pregnancy Phase	Post Partum phase	Pregnancy Phase	Post Partum phase	Pregnancy Phase	Post Partum phase	Pregnancy Phase	Post Partum phase	Pregnancy Phase	Post Partum phase
Base : Those receive instructions	**465**	**304**	**184**	**34**	**251**	**71**	**482**	**325**	**245**	**89**	**244**	**55**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
About taking one dose at night after meal	84.7	92.1	78.8	85.3	91.6	95.8	95	92.6	74.3	66.3	73.8	61.8
About taking only one dose per day	56.1	37.5	58.7	52.9	31.1	15.5	23.7	27.4	41.2	41.6	26.3	30.9
About not taking pills without having meal	19.1	24	16.8	20.6	4.4	1.4	2.3	2.8	5.7	6.7	1.3	3.6
About taking pills twice a day	2.8	3.6	10.3	2.9	2.8	1.4	0.8	0.9	3.3	2.2	9.5	3.6
Don't take with tea or coffee	-	-	-	-	-	-	-	1.5	0.4	-	0.8	1.8
3 times a day	-	-	-	-	-	-	-	0.3	0.4	-	0.4	1.8

Note: The percentages add up to more than 100 because of multiple responses

The data below reveals that women received oral instructions for IFA consumption primarily from health facilities (health post and sub-health post), FCHVs, and MCHWs. FCHVs in Com B seemed most active in this regard when compared to FCHVs in other components. They were also more active than during the previous enumeration. Similarly, health facilities also seemed more active than before, except in Com B.

Table 26: Oral Instruction Provided By

	Round 1			Round 2		
	COM A	Com B	Com C	COM A	COM B	COM C
Base : Those who received instructions during pregnancy	**465**	**184**	**251**	**482**	**245**	**244**
	%	**%**	**%**	**%**	**%**	**%**
FCHVs	72.5	27.7	8.8	39.2	64.9	13.9
Sub-Health post	37	32.6	26.7	48.8	22.1	43.0
Health post	8.8	35.9	15.5	13.9	18.0	29.9
Hospital	12.9	15.2	22.7	7.7	16.7	11.5
MCHWs	3.2	19.6	31.1	24.3	16.7	20.9
VHWs	-	2.2	7.2	0.2	-	5.7
Private Doctor/Clinic	0.6	1.6	6	3.9	2.8	4.1

Outreach Clinic (ORC)	-	-	-	-	0.8	5.7
Traditional Birth attendant	-	-	-	-	-	0.4
Pharmacy	-	-	-	1	-	0.4
Doctor	-	-	-	0.6	0.4	2.0
Health Post incharge	-	-	-	-	-	0.8

Note: The percentages add up to more than 100 because of multiple responses

5.13 Dose

An overwhelming majority of the women throughout all 15 districts were taking IFA supplementation once in a day during pregnancy (Com A-100%; Com B-95% and Com C-89%). There were some incidences where women were found taking IFA twice a day. These cases were observed to be higher from Taplejung district.

Table 32: IFA dose during the period of pregnancy

Round 2	**COM A**	Rupendehi	Dailekh	Darchula	Saptari	Dolpa	**COM B**	Rolpa	Accham	Kalikot	Jajarkot	Rukum	**COM C**	Bhojpur	Illam	Dhankuta	Therathum	Taplejung
Base : Who have taken IFA at pregnancy	**483**	133	84	36	213	17	**100**	14	25	9	31	21	**105**	28	35	15	15	12
	%	%	%	%	%	%	**%**	%	%	%	%	%	**%**	%	%	%	%	%
1 time	**100**	99	99	100	100	100	**95**	93	96	89	97	95	**89**	82	97	87	100	67
2 time	**0**	1	1	-	-	-	**4**	7	4	11	-	5	**11**	14	3	13	-	33
3 time and more	**-**	-	-	-	-	-	**1**	-	-	-	3	-	**1**	4	-	-	-	-

A large majority of women who had taken IFA supplementation at post partum were seen to have taken one tablet a day (Com A: 98.2%, Com B: 95.5%, Com C: 93%). However, as during the previous enumeration, some cases were still seen where women were taking 2, 3, or even more IFA tablets in a day. *(Table 33)*

Table 33: IFA dose during the period of post partum

	Round 1			**Round 2**		
	Com A	**Com B**	**Com C**	**Com A**	**Com B**	**Com C**
Base : Who have taken IFA at Post partum	**308**	**34**	**72**	**326**	**89**	**57**
	%	**%**	**%**	**%**	**%**	**%**
1 tab	93.2	97.1	94.4	98.2	95.5	93
2 tabs	4.5	2.9	1.4	1.5	4.5	5.3
3 tabs	0.6	-	-	-	-	1.8
7 tabs and more	1	-	1.4	0.3	-	-
Average	**1.13**	**1.03**	**1.07**	**1.03**	**1.04**	**1.09**

5.14Benefit Observed on Taking IFA Supplementation

Table 34 shows whether or not respondents had perceived any benefits of taking IFA supplementation. A good proportion of both, pregnant and post partum women in Com A and Com B reported to have observed benefits; more than during the previous enumeration. However, comparatively fewer women in Com C reported to have observed health benefits after taking IFA supplementation.

Table 34: Benefit observed after taking IFA Supplementation

	COM A	**COM B**	**COM C**	**COM A**	**COM B**	**COM C**
Round 1	**Pregnant Phase**			**Post partum Phase**		
Base : Those taken IFA supplementation	**466**	**193**	**254**	**308**	**34**	**72**
	%	**%**	**%**	**%**	**%**	**%**

Benefit observed	42.7	42.5	38.2	42.2	50	44.4
Benefit not observed	57.3	57.5	61.8	57.8	50	55.6
Round 2						
Base : Those taken IFA supplementation	**483**	**245**	**246**	**326**	**89**	**57**
Benefit observed	76.6	60.4	31.3	78.5	58.4	35.1
Benefit not observed	9.7	19.6	17.1	8.9	29.2	21.1
Not able to notice to this time	13.7	20.0	51.6	12.6	12.4	43.9

Among those who reported to have noticed benefits after taking IFA supplementation, ability to comfortably move around, reduction in drowsiness and dizziness, and reduction in tiredness were cited most frequently. It was also seen that a lot of post partum women attributed the birth of their healthy child to IFA intake. Going by the survey data, IFA consumption seemed to have increased pregnant women's appetite as well.

Table 35: Benefits observed

	Round 1			Round 2		
	Com A	**Com B**	**Com C**	**Com A**	**Com B**	**Com C**
During pregnancy	**466**	**193**	**254**	**483**	**245**	**246**
	%	**%**	**%**	**%**	**%**	**%**
Reduced drowsy and dizziness	51.3	70.7	59.8	47.4	21.2	11.0
Was able to move around comfortably	47.2	76.8	49.5	51.6	44.9	12.6
Reduced tiredness	23.6	29.3	43.3	39.1	25.3	10.2
Increased appetite	32.7	14.6	30.9	23.4	18.4	16.2
Increase blood	13.1	3.7	1	5.6	0.8	1.6
Healthy baby	5	1.2	-	1.5		0.4
Increase energy	5	-	-	28.8		1.2

Note: The percentages add up to more than 100 because of multiple responses

5.15 Experience of Adverse Effect on Taking IFA Supplementation

Clearly, a sweeping majority across the board had not experienced any adverse effect on taking IFA supplementation during pregnancy as well as post partum phase. The case was similar during the previous enumeration as well. *(Table 35)*

Table 35: Experience of Adverse Effect on Taking IFA Supplementation

	COM A	COM B	COM C	COM A	COM B	COM C
Round 1	**Pregnant Phase**			**Post Partum Phase**		
Base : Those who have take IFA	**466**	**193**	**254**	**308**	**34**	**72**
	%	**%**	**%**	**%**	**%**	**%**
Adverse effect	5.4	8.3	16.9	1.3	8.8	9.7
No adverse effect	94.6	97.7	83.1	98.7	91.2	90.3
Round 2						
Base : Those who have taken IFA	**483**	**245**	**246**	**326**	**89**	**57**
	%	**%**	**%**	**%**	**%**	**%**
Adverse effect	8.7	8.6	6.5	8.6	6.7	1.8
No adverse effect	90.3	88.2	85.4	90.8	91	98.2
Could not respond	1	3.2	8.1	0.6	2.2	-

Among the respondents who reported to have experienced adverse effect on consumption of IFA supplements, most mentioned black stool, nausea, and bitter taste in mouth. Complaint of black stool was very high among post partum women. Compared to the previous enumeration, bitter taste in mouth (Round 1: 63.1% and Round 2: 22.8%) and nausea (Round 1: 51.2% and Round 2: 36.7%)

was less reported. It was also seen that women complained of more varieties of adverse effects during pregnancy phase than during post partum phase. *(Table 36)*

Table 36: Adverse effect experienced

	Round 1	Round 2
Base : Those experienced adverse effect during pregnancy	**84**	**79**
	%	**%**
Bitter taste in mouth	63.1	22.8
Nausea	51.2	36.7
Black stool	31.0	49.3
Abdominal pain	11.9	8.8
Constipation	3.6	3.8
Had Diarrhea	-	3.8
Had Dizziness	-	3.8
Bad breath	3.6	
Loss in appetite	-	2.5
Felt weakness	-	1.3
Had urine infection	-	1.3

Note: The percentages add up to more than 100 because of multiple responses

5.16 Dropout of IFA Supplementation

During the survey it was observed that a large majority of the pregnant and post partum women continued taking IFA supplementation once they started it. However, the proportion of women who dropped out seemed to have noticeably increased among 3rd trimester women in com B (R1-5%, R2-12.5%) and Com C (R1-3.7%, R2-11.5%) than in the previous enumeration. On the other hand the major improvement seems to be among women in post partum phase in Com A (R1-6.5, R2-1.7%) (*(Table 37)*

Table 27: Stopped Taking IFA Supplementation after starting

	Com A		Com B				Com C			
	Post Partum		Post Partum		2nd Trimester	3rd Trimester	Post Partum		2nd Trimester	3rd Trimester
	Pregnant Phase	Post Partum Phase	Pregnant Phase	Post Partum Phase			Pregnant Phase	Post Partum Phase		
Round 1										
Base	**520**	**520**	**120**	**120**	**118**	**80**	**120**	**120**	**120**	**82**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Yes	11.7	6.5	15.9	1.7	7.6	5.0	15.0	3.4	5.8	3.7
No	88.3	93.5	84.1	98.3	92.4	95.0	85.0	96.6	94.2	96.3
Round 2										
Base	**520**	**520**	**120**	**120**	**120**	**80**	**120**	**120**	**122**	**78**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Yes	11.0	1.7	11.7	3.3	6.6	12.5	10.8	6.7	2.4	11.5
No	89.0	98.3	88.3	96.7	93.3	87.5	89.2	93.3	97.5	88.5

When all those pregnant and postpartum respondents who had dropped out of IFA supplementation during pregnancy were enquired about the reasons for dropping out from IFA supplementation, a large variety of reasons were reported. For instance, forgetting to take medicine or being unable to manage time for continuing IFA supplementation came up as commonly cited reasons for dropping out of IFA supplementation in the previous round. In the current round, a large proportion of women mentioned their inability to go to places for obtaining IFA tablets, its bad taste and side effects as the reasons for dropping out.

Table 28: Reason for dropping out IFA supplements

	Round 1
Base : Those who stopped taking IFA supplementation	**121**
	%
Forgot to take	25.6
Tablets deficit and could not met FCHV	15.7
Not available in health facility	14.1
Experienced side effects	9.1
Because of Nausea	7.4
Do not want to take	7.4
Health post are not easily accessible	5.8
Family member asked not to take	5
Fear of having a big baby	4.1
Bad smell of blood	2.5
Bitter taste in mouth	2.5

	Round 2
Base : Those who stopped taking IFA supplementation	**114**
	%
Could not make time to go and collect	27.4
Did not like the taste	20.2
Experienced side effects	14.9
Not available in health facility	7.9
Forgot to take medicine	6.1
Fear of having a big baby	5.3
Not available with MCHW	4.4
Felt Sick	3.5
Experienced side effects	3.5
Health post are not easily accessible	2.7
Due to irregular supply	2.6

****Note: The percentages add up to more than 100 because of multiple responses***

Table 39 below presents the IFA consumption pattern of those respondents who stopped taking IFA supplementation.

Table 39: IFA consumption among who dropped out

	COM A		COM B				COM C			
	Post Partum		Post Partum				Post Partum			
Round 1	Pregnant Phase	Post Partum Phase	Pregnant Phase	Post Partum Phase	**2nd Trimester**	**3rd Trimester**	Pregnant Phase	Post Partum Phase	**2nd Trimester**	**3rd Trimester**
Base : Who stopped taking IFA	**61**	**34**	**19**	**2**	**9**	**4**	**18**	**4**	**7**	**3**
Minimum days IFA taken	3	1	7	6	5	30	5	2	4	3
Maximum days IFA taken	50	29	50	14	15	93	152	6	90	141
Mean days IFA taken	48	7	34	10	10	62	66	4	25	89
Round 2										
Base : Who stopped taking IFA	**57**	**9**	**14**	**4**	8	10	**13**	**8**	3	9
Minimum days IFA taken	5	1	5	3	4	7	5	3	5	7
Maximum days IFA taken	159	31	99	9	43	149	113	30	62	173
Mean days IFA taken	72	14	50	6	18	73	59	16	27	68

It can be seen from above table that in components A, B and C, the respondents during pregnancy stopped taking IFA supplementation during pregnancy after 72, 50 and 59 days on an average. While comparing the data with previous round the average IFA consumption has increased in component A and component B. The average consumption among 2nd and 3rd women too have increased in this round as compared to earlier.

5.17 IFA Consumption Pattern and Compliance Status

The government policy requires that both second trimester and third trimester pregnant women need to take 90 IFA tablets respectively, during their pregnancy period. In other words, a pregnant woman in a normal situation is supposed to take 180 IFA tablets during her entire pregnancy period, and a postpartum woman is supposed to take 45 IFA tablets from the first day of the delivery. Considering the practicality, IFA intake of at least 80% of total requirement has however been considered as cut-off for compliance in this study

In Table 40 below, IFA consumption pattern among postpartum women in all 3 components is presented. Among post partum, women who complied with the dosage regimes (i.e. who took in the range of 80-100% of full dose requirement) during their last pregnancy was observed somewhat similar in all three components. The compliance status was however not significantly different in Component A, B and C (R2: Com A -67%, Com B-66% and Com C- 65%). The proportion was significantly increased in Component B in round two compared to in round one (44%), while there were not much changes in Com A and Com C.

The study also assessed the IFA consumption pattern of postpartum women during postpartum period. As the eligible respondents were women of up to 45 days post-partum, it was not possible to calculate the number of tablets the postpartum women would take during their entire postpartum period. Therefore, a relative compliance framework was used. The framework was developed by MI Nepal Office and provided to The Nielsen Company Nepal. Basically, the number of days postpartum women reported to have taken IFA tablets as on the date of the interview was cross referenced against the number of days they should have taken IFA tablets on that day. If a respondent had taken at least 80 percent of the doses that they should have taken by the time of the interview, they were then considered to have complied with the dosage regimen.

The Table 40 shows that compliance of IFA intake among postpartum women was highest in Component B (67%), followed by Component A (58%) as compared to Component C (39%[24]). The proportion of women who complied with the IFA supplementation was observed to be significantly lesser in Component C.

Table 40: Compliance status of IFA Supplementation

	COM A		COM B				COM C			
	Post partum		Post partum		2nd Trimester	3rd Trimester	Post partum		2nd Trimester	3rd Trimester
Base : All Respondents	Pregnancy status	Post partum Status	Pregnancy status	Post Partum status			Pregnancy status	Post Partum status		
Round 1										
Base : All	**520**	**520**	**120**	**120**	**118**	**80**	**120**	**120**	**120**	**82**
Compliance Achieved	67.9%	50.2%	44.1%	25.8%	23.7%	36.3%	65.8%	53.3%	41.7%	52.5%
Compliance Not Achieved	32.1%	49.8%	55.9%	74.2%	76.3%	63.7%	34.2%	46.7%	58.4%	47.5%
Round 2										
Base : All	**520**	**520**	**120**	**120**	**118**	**80**	**120**	**120**	**122**	**78**
Compliance Achieved	67%	58%	66%	67%	44%	54%	65%	39%	33%	42%
Compliance Not Achieved	33%	42%	34%	33%	56%	46%	35%	61%	67%	58%

The table 41 shows that compliance of IFA intake among postpartum women in com B is the highest as compared women from other components. Comparing with previous round there seem to be a foremost improvement among postpartum women in com B (R1-26%, R2-67%). The improvement has also been observed in Com B during their pregnancy period.

The table 40 also presents the proportions of respondents taking IFA tablets that met different proportion of total requirements. For example, 3% of respondents in Component A took IFA tablets that met 1-19% of requirement in the whole pregnancy period (i.e. they took IFA tablets for 2-34 days only).

Table 41: IFA consumption among post partum women during their pregnant and postpartum phase

	Round 1						Round 2					
	Pregnant Phase			Post Partum Phase			Pregnant Phase			Post Partum Phase		
Distribution of respondents taking IFA (x% of requirement)	COM A	COM B	COM C	COM A	COM B	COM C	COM A	COM B	COM C	COM A	COM B	COM C
Base: All respondents	**520**	**120**	**120**	**520**	**120**	**120**	**520**	**120**	**120**	**520**	**120**	**120**
0%	10	35	14	41	72	40	0	5	0	0	2	0

[24] Chi-square test at 5% level of significance (p=0.666)

1-19%	3	0	9	1	0	1	3	3	5	0	1	3
20-39%	4	9	2	2	0	2	4	4	3	0	1	0
40-59%	9	3	4	3	1	2	5	3	6	1	2	2
60-79%	6	12	4	2	2	3	14	3	8	3	2	3
80-100%	68	44	66	50	26	53	67	66	65	58	67	38

The table 42 presents IFA consumption pattern among pregnant women in Component A and B. As the eligible respondents were pregnant women in their 2nd and 3rd trimesters, it was not possible to calculate the number of tablets the pregnant women would take during their entire pregnancy period. Like in analysis of IFA compliance during postpartum period, a relative compliance framework, developed by MI Nepal, was used. The number of days pregnant women reported to have taken IFA tablets as on the date of the interview was cross referenced against the number of days they should have taken IFA tablets on that day. If a pregnant woman had indeed taken at least 80 percent of the doses that they should have taken by the time of the interview, they were then considered to have complied with the dosage regimen.

As can be seen in table below, the 42% second trimester and 52% third trimester pregnant women had taken at least 80% of total dose regimen as on the day of interview. The compliance of IFA among pregnant women of both trimesters in Component B was observed high as compared to that in Component C[25].

Table 42: IFA consumption among pregnant women

	Round 1				**Round 2**			
	Com B		**COM C**		**Com B**		**Com C**	
	2nd Trimester	**3rd Trimester**	**2nd Trimester**	**3rd Trimester**	**2nd Trimester**	**3rd Trimester**	**2nd Trimester**	**3rd Trimester**
Base: All	**118**	**80**	**120**	**82**	**120**	**80**	**122**	**78**
0%	44	39	30	18	1	0	3	0
1-19%	11	7	7	1	5	8	7	9
20-39%	3	4	6	2	4	6	4	8
40-59%	11	3	7	8	5	2	9	5
60-79%	7	11	8	17	8	9	7	18
80-100%	24	36	42	52	44	54	33	42

The proportion of the women taking at least 180 tablets during pregnancy in Com A, B and C was 21.3%, 41% and 17.1% respectively. While comparing the data with previous round, improvement in IFA consumption can be observed in all three components. Among the same the significant differences was observed in Com B (R1-14.1%, R2-41%)[26].

Table 42a IFA Consumption % of the postpartum women during their pregnancy

	Round 1				**Round 2**			
	All	**COM A**	**COM B**	**COM C**	**All**	**COM A**	**COM B**	**COM C**
Base : Those taken IFA	647	466	78	103	**688**	**483**	**100**	**105**
DK/ CS (%)	14.8	13.1	26.9	13.6	1	0.2	6	-
Less than 180 tabs (%)	71.4	72.5	59	75.7	75.4	78.5	53	82.9
180 tabs and above (%)	13.8	14.4	14.1	10.7	23.5	21.3	41	17.1

Table 42a. Illustrate the IFA distribution among the postpartum women during their pregnancy. The average number of IFA tablets in COM A, B and C were 152 tablets, 170 tablets and 150 tablets respectively. Table 42b presents the breakdown of IFA consumption pattern in round 2.

[25] Chi-square test at 5% level of significance (second trimester, p=0.003; third trimester, p=0.038)
[26] Chi-square test at 5% level of significance (p=0.000)

Table 42.b IFA distribution

IFA distribution (Round 2)	All	COM A	COM B	COM C
Base : Those taken IFA	**681**	**482**	**94**	**105**
	%	%	%	%
001-029 tabs	3.1	2.3	7	2.9
030-059 tabs	2.6	2.3	3	3.8
060-089 tabs	4.4	4.3	5	3.8
090-119 tabs	6.3	6.6	3	7.6
120-149 tabs	12.8	14.1	7	12.4
150-179 tabs	47.4	49.1	34	52.4
180 and above tabs	23.5	21.3	41	17.1
Standard dev	45.48	43.77	48.24	48.1
Average	154	152	170	150
Median	173	162	179	169

5.18 IFA Folic Acid Tablet (IFA) Consumption

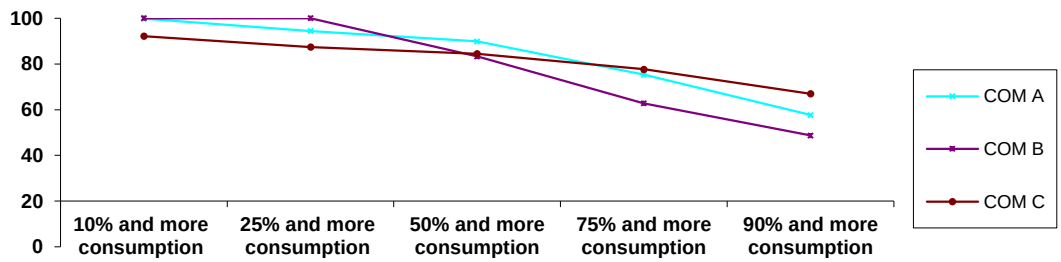
The table below illustrates IFA consumption among post partum women in their pregnant as well as post partum phase.

Same as in previous round of the survey a larger majority of the post partum women from all components in pregnant phase have consumed at least 25% of the total dose of IFA supplementation. In post partum phase, larger proportion of the respondents had consumed IFA for at least 50% of the total dose.

Table 43: IFA consumption among post partum women (Cumulative distribution)

	Round 1						Round 2					
	Pregnant Phase			Postpartum Phase			Pregnant Phase			Postpartum Phase		
Cumulative Distribution	COM A	COM B	COM C	COM A	COM B	COM C	COM A	COM B	COM C	COM A	COM B	COM C
Base : Those taking IFA Tab	**466**	**78**	**103**	**308**	**34**	**72**	**483**	**100**	**105**	**326**	**89**	**57**
10% and more consumption	99.8	100	92.2	100	100	98.6	98.3	93	98.1	100	96.6	98.2
25% and more consumption	94.4	100	87.4	95.8	100	97.2	96.1	90	93.3	100	96.6	94.7
50% and more consumption	89.9	83.3	84.5	93.5	100	94.4	90.7	85	89.5	99.1	94.4	93
75% and more consumption	75.3	62.8	77.7	85.4	94.1	88.9	73.1	79	76.2	94.2	91	84.2
90% and more consumption	57.7	48.7	67	73.1	88.2	77.8	44.9	67	53.3	84	85.4	71.9

Round 1



Round 2

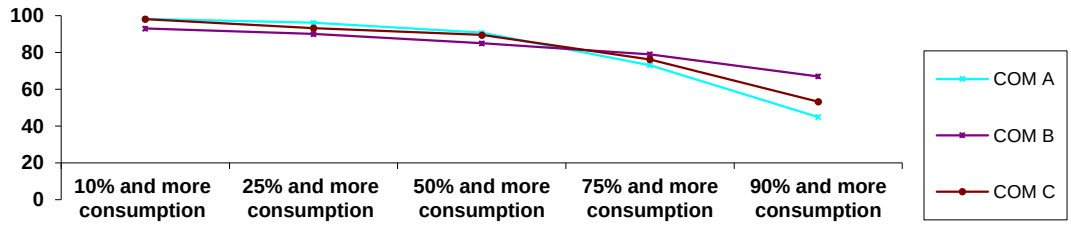


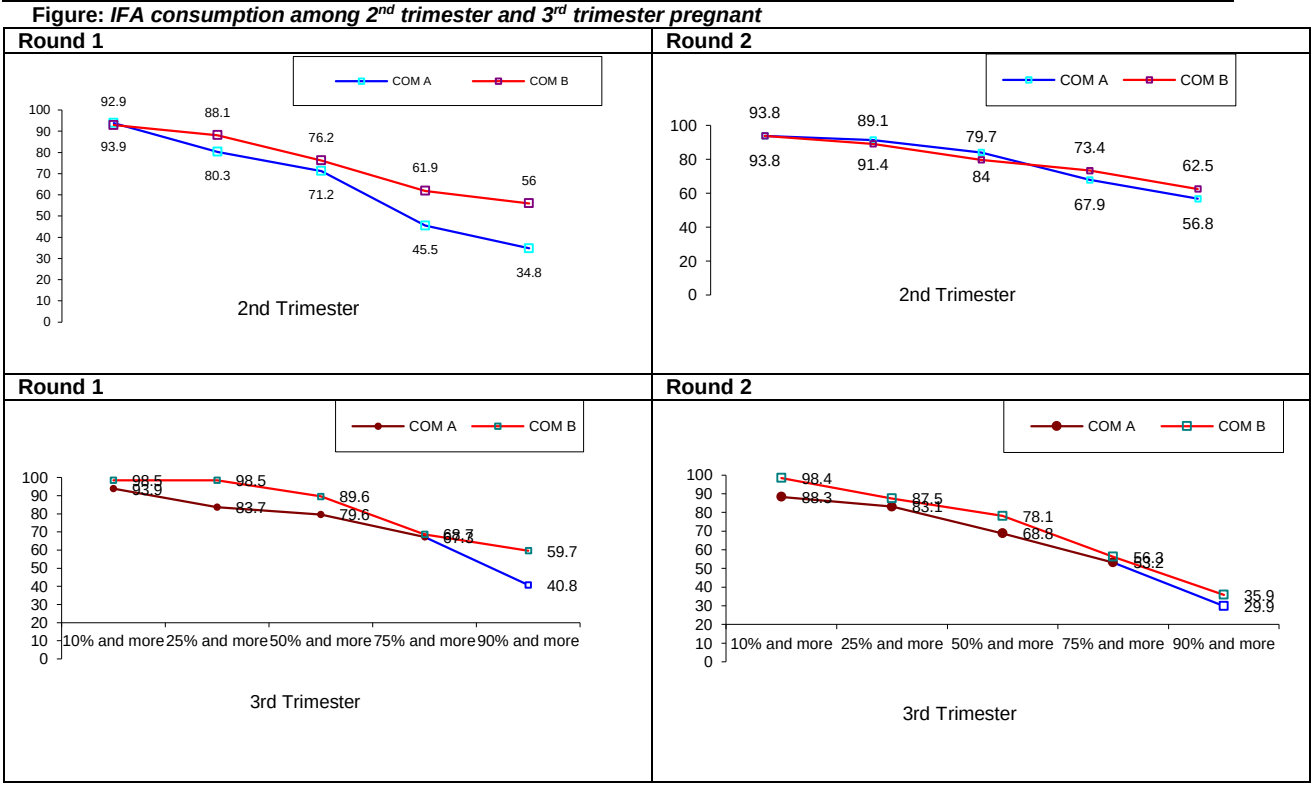
Figure 7: ***IFA consumption among post partum women during pregnancy***

As similar to post partum majority of 2nd trimester and 3rd trimester pregnant women have taken at least 25% of the total dose of IFA supplementation. However, the trend of consumption has declined at 90 percent distribution point as compared to previous round. There was a significant fall in consumption among 2nd trimester in Com B in previous round which was observed improving in the second round of the survey. The highest fall in consumption pattern during this round of survey was observed among 3rd trimester women in Com B (29.9%).

Table 44: IFA consumption among pregnant women

	Round 1				Round 2			
	2nd Trimester		3rd Trimester		2nd Trimester		3rd Trimester	
Cumulative Distribution	**COM B**	**COM C**	**COM B**	**COM C**	**COM B**	**COM C**	**COM B**	**COM C**
Base : Those taking IFA Tab	**66**	**84**	**49**	**67**	**81**	**64**	**77**	**64**
10% and more	93.9	92.9	93.9	98.5	93.8	93.8	88.3	98.4
25% and more	80.3	88.1	83.7	98.5	91.4	89.1	83.1	87.5
50% and more	71.2	76.2	79.6	89.6	84	79.7	68.8	78.1
75% and more	45.5	61.9	67.3	68.7	67.9	73.4	53.2	56.3
90% and more	34.8	56	40.8	59.7	56.8	62.5	29.9	35.9

Figure: ***IFA consumption among 2nd trimester and 3rd trimester pregnant***



5.19 De-worming

To the question on whether or not they had taken de-worming medication during pregnancy, a large number of respondents across all three components answered in the affirmative. Among the three

components, practice of taking de-worming tablets was seen most prevalent in Com A. Similarly, de-worming practice seemed to have improved in Com B.

Table 45: De-worming

	Round 1			Round 2		
	COM A	**COM B**	**COM C**	**COM A**	**COM B**	**COM C**
Base : All	**520**	**318**	**322**	**520**	**320**	**320**
Yes %	69.4	52.2	73	84.2	69.7	71.6
No %	30.6	47.8	27	15.8	30.3	28.4

5.20 Vitamin A coverage among post partum women

A large proportion of women (Com A: 70.6%, Com B: 68.3%, Com C: 60%) seemed to have taken Vitamin A supplementation during their post partum. Compared to the previous enumeration, vitamin A coverage in Com A and Com B is remarkably high (R1-46.2%, R-270.6%) and the improvement in Com B is also impressive (R1-30%, R2-68.3%).

Table 46: Vitamin A coverage

	Round 1			Round 2		
	COM A	**COM B**	**COM C**	**COM A**	**COM B**	**COM C**
Base : All respondents	**520**	**120**	**120**	**520**	**120**	**120**
Yes %	46.2	30	61.7	70.6	68.3	60
No %	53.3	70	34.2	29	30.8	39.2
Don't know / Can't say %	0.6	-	4.2	0.4	0.8	0.8

Chapter 6: Anemia in Pregnant Women

6.1 Awareness of Anemia

During the study, it was observed that awareness of anemia among the respondents from Component C was higher (45.0%) as compared to the respondents from Component A (14.4%) and Component B (13.8%). *(Figure 8)*

The case was quite similar during previous study also. There did not seem any satisfactory improvement in the awareness level about anemia in Com A and in Com B.

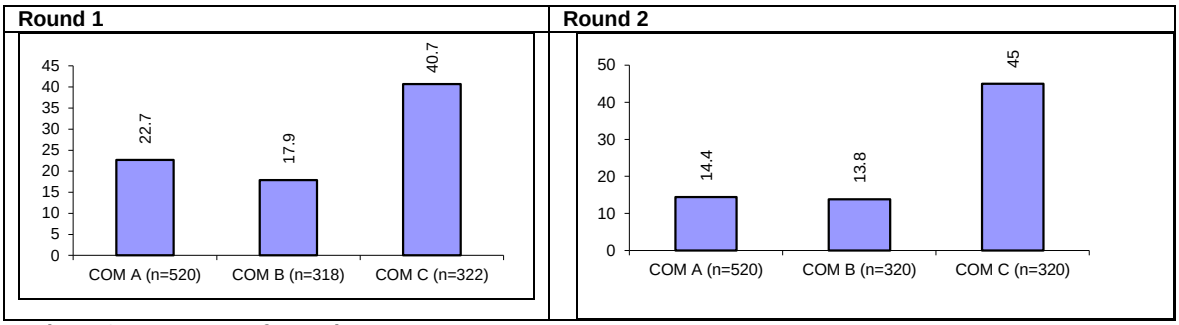


Figure 8: Awareness of Anemia

Table 47: Awareness of Anemia

	Base : All	Round 1 Aware %	Round 2 Aware %
COM A	**520**	22.7	14.4
COM B	**318**	17.9	13.8
-Post Partum	**120**	18.3	12.5
-2nd Trimester	**118**	17.8	13.3
-3rd Trimester	**80**	17.5	16.3
COM C	**322**	40.7	45
-Post Partum	**120**	43.3	47.5
-2nd Trimester	**120**	41.7	45.9
-3rd Trimester	**82**	35.4	39.7

6.2 Causes for Anemia during Pregnancy

Pregnant and post partum women who were aware about anemia were questioned about the causes for anemia among pregnant women. Reported causes included “Loss of blood” (Com A: 56.0%, Com B: 59.1%, Com C: 34.0%), “Inadequate IFA in daily diet” (Com A: 34.7%, Com B: 22.7%, Com C: 31.3%), and “Not taking IFA supplementation during pregnancy” (Com A: 22.7%, Com B: 11.4%, Com C: 10.4%), among others. 36% of women in Com C also provided “Don’t Know/Can’t Say” response, compared to very less of this response in Com A (4%). (*Table 48*)

As compared to the previous round, however, it was seen that the proportion of respondents who identified “Less IFA intake” and “Not taking IFA supplementation” as causes of anemia during pregnancy has declined.

A few respondents also cited “Lack of Vitamin A” as a cause of anemia, which showed some confusion among respondents.

Table 48: Causes for Anemia during Pregnancy

	Round 1			Round 2		
	Com A	**Com B**	**Com C**	**COM A**	**COM B**	**COM C**
Base : Those heard of Anaemia	**118**	**57**	**131**	**75**	**44**	**144**
	%	**%**	**%**	**%**	**%**	**%**
Lack of blood in a body	53.3	59.6	35.2	65.3	65.9	35.4
Because of less IFA intake	50.8	35.1	47.3	34.7	22.7	31.3
On not taking IFA supplementation	30.5	28.1	36.6	22.7	11.4	10.4
On not maintaining pregnancy intervals	28.8	47.4	4.6	13.3	9.1	3.5
Underage/ teenage Pregnancy	20.3	28.1	10.7	14.7	4.6	5.5
Due to heavy work	6.8	5.3	1.5			
Parasitic infecsation	5.1	12.3	2.3	10.7	2.3	0.7
Lack of vitamin	-	-	-	1.3	-	1.4
Could not respond	-	-	-	4	18.2	36.1

Note: The percentages add up to more than 100 because of multiple responses

6.3 Consequences of Anemia

When further asked about the consequences of anemia, a large number of pregnant and post partum women reported “Possibility of death of mother” (Com A: 40.0%, Com B: 27.3% and Com C: 27.8%) and “Possibility of miscarriage” (Com A: 58.7%, Com B: 31.8% and Com C: 9.7%). *(Table 49)*

Compared to the previous round, it was seen that lesser proportion of women in Com C believed miscarriage as a consequence of anemia. Also, as a whole, lesser proportion of women were saying “Birth of underweight, anemic, or malnourished babies” as a consequence of anemia. When compared with other components, more women in Com A seemed knowledgeable on consequences of anemia.

Table 49: Consequences of Anemia

	Round 1			Round 2		
	Com A	**Com B**	**Com C**	**COM A**	**COM B**	**COM C**
Base : Those heard of Anemia	**118**	**57**	**131**	**75**	**44**	**144**
	%	**%**	**%**	**%**	**%**	**%**
Possibility of death of mother	50.8	54.4	15.3	40	27.3	27.8
Possibility of miscarriage	19.5	54.4	46.6	58.7	31.8	9.7
Loss of energy	12.3	47.4	45.8	20	18.2	18.8
Possible birth of underweight child	31.4	36.8	34.4	17.3	11.4	8.3
Possible birth of malnourished baby	26.3	19.3	7.6	14.7	11.4	10.4
Possibility of being infected	6.8	3.5	3.8	4	4.6	9.7
Don't Know				5.3	11.4	11.8

Note: The percentages add up to more than 100 because of multiple responses

6.4 Precaution to Avoid Anemia

The data from the two round of the survey shows that most of the respondents were in thoughts that Anemia during pregnant and post partum can be avoided by taking IFA tables and by taking sufficient quantity of IFA rich food. In earlier round respondents also stated that Anemia can be avoided by taking vitamin rich nutritious food whereas in this round, majority focused more into IFA contents.*(Table 50)*

Table 50: Precaution to Avoid Anaemia

	Round 1			Round 2		
	COM A	**COM B**	**COM C**	**COM A**	**COM B**	**COM C**

Base: Those aware of Anemia	**118**	**57**	**131**	**75**	**44**	**144**
	%	**%**	**%**	**%**	**%**	**%**
Should take sufficient quantity of IFA rich food during pregnancy	44.1	56.1	57.3	73.3	36.4	31.2
Should take IFA tablets from the start of 2nd trimester to six weeks after delivery of child	52.5	54.4	38.2	50.7	22.7	14.6
By eating vitamin rich food	3.4	-	0.8	-	-	-
By eating nutritious food	2.5	3.5	2.3	-	-	-
By eating lots of fruits	2.5	1.8	3.1	-	-	-
Control of parasites , malaria and kalazar	-	-	-	5.4	-	0.7
Could not respond	-	-	-	5.3	20.5	18.1

Note: The percentages add up to more than 100 because of multiple responses

Chapter 7: Information on Post Partum Women

7.1 Place of Delivery

Majority of the post partum women from all three components reported that they had delivered at home. However, home was still the pre-dominant place of delivery; there seemed a consistent increase in the number of deliveries at hospitals and health centers. This improvement was seen most noticeably in Com B. Similarly, deliveries at home in Com A was also found to be lesser than in the previous round. (*Table 51)*

Table 51: Place of Delivery

	Round 1			Round2		
	COM A	**COM B**	**COM C**	**COM A**	**COM B**	**COM C**
Base : All respondents	520	120	120	**520**	**120**	**120**
	%	**%**	**%**	**%**	**%**	**%**
At home	72.1	87.5	75.8	55.8	69.2	68.3
At hospital	21.9	4.2	17.5	23.1	20.8	20.8
At health post /center /sub-health post	5.0	5.0	5.0	19.2	8.3	10
Clinic	0.4	-	0.8			
Others	0.6	3.4	0.8	1.9	1.7	0.9

7.2 Assistance Provided During Delivery

A majority of the post partum women (73.1%) who had not delivered in health facilities or hospitals reported that their family members helped them during the time of delivery, followed by neighbors (66.9%) and TBA (24.1%). It was also observed that TBAs were most active in Com A, whereas only in Com C were ANMs and MCHWs significantly involved. Comparatively, post partum women in Com B had received more assistance from TBAs than in previous round. They also reported less assistance from family members than women from other components. *(Table 52)*

Table 52: Assistance Provided During Delivery

	Round 1				Round 2			
	All	**Com A**	**Com B**	**Com C**	**All**	**Com A**	**Com B**	**Com C**
Base : Those delivered other than health facilities	**582**	**380**	**109**	**93**	**468**	**300**	**85**	**83**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Family members	81.6	80.8	84.4	80.6	73.1	77.7	48.2	81.9
Neighbors	38.7	36.3	45.9	39.8	66.9	74	67.1	41
Traditional birth attendance (TBA)	14.6	18.7	1.8	12.9	24.1	31.7	12.9	8.4
MCHWs	4.5	3.2	2.8	11.8	3.4	3	-	8.4
Auxiliary Nurse Midwife (ANM)	1.7	1.1	0.9	5.4	3	1.7	-	10.8
Doctor	1.5	1.8	0.9	1.1				
Social health worker	1.5	1.6	0.9	2.2				
COULD NOT RESPOND					1.3	1.7	1.2	-

Note: The percentages add up to more than 100 because of multiple responses

7.3 Incidence of Premature Baby

The study findings showed that there were very few pre mature births. Out of total 760 responses of post partum women; there were only 0.3% cases of babies born after 7 months of pregnancy and 1.4% after 8 months. Most of the babies were born after 9 and 10 months of pregnancy. The proportion of women who had 10 months pregnancy was seen to have increased in comparison to previous round; more so in Com B. *(Table 53)*

Regarding the size of baby at the time of birth, most of the women perceived their child's size during the time of birth as average. In Com C, however, significant number of women (20.8%) thought their babies were large at the time of birth.

Table 53: Completed months of pregnancy

	Round 1				Round 2			
	All	**Com A**	**Com B**	**Com C**	**All**	**Com A**	**Com B**	**Com C**
Base : Post partum women	**760**	**520**	**120**	**120**	**760**	**520**	**120**	**120**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**
7 month					0.3	0.4	-	-
8 month	1.1	0.8	-	3.3	1.4	1	2.5	2.5
9 month	95.4	96	98.3	90	71.8	77.3	40	80
10 months	3.6	3.3	1.7	6.7	26.3	21.3	56.7	17.5
10 months+					0.1	-	0.8	-
Size of the baby at the time of birth								
Very small	7.9	6.3	15.8	6.7	3.9	3.8	6.7	1.7
Average size	74.7	73.8	69.2	84.2	88.8	92.7	83.3	77.5
Large	17.4	19.8	15	9.2	7.2	3.5	10	20.8

Chapter 8: Food Habits

8.1 IFA / Vitamins

8.1.1 Awareness of IFA-rich Food

Majority of respondents identified “Green leafy vegetables”, “Meat/Fish”, “Beans, peas, pulses, and soybean”, and “Milk” as IFA-rich foods. When compared among components, more women seemed knowledgeable about IFA-rich foods in Com A. Similarly, differing from the result at other components, lot of women in Com C did not consider milk as an IFA-rich food. *(Table 54)*

Compared with the baseline study, awareness of IFA-rich foods seemed to have declined in Com B.

Table 54: Awareness of IFA-rich Food

	Round 1				Round 2			
	All	**COM A**	**COM B**	**COM C**	**All**	**COM A**	**COM B**	**COM C**
Base : All	**1160**	**520**	**318**	**322**	**1160**	**520**	**320**	**320**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Green Vegetable	68.2	72.3	71.1	58.7	61.6	79.2	41.9	52.8
Meat/ Fish	61.6	54.6	74.2	60.6	57.6	78.7	41.6	39.4
Lentils	60.3	64.2	67.6	46.9	54.8	68.7	34.7	52.2
Milk/ Yoghurt	44.7	37.1	69.8	32.3	44.3	71	37.5	7.8
Eggs	16.7	5.2	33.3	18.9	19.1	34	5.0	9.1
Yellow fruits	11.1	16.2	9.1	5	20.8	34	8.8	11.3
Millets/maize	4.6	2.7	10.4	1.9	5.5	5.4	5.0	6.2
Ghee	0.5	0.2	1.3	0.3	0.8	1.2	0.6	0.3
Spicy food	0.1	0.2	-	-				
Could not respond	25.7	24.8	20.1	32.6	23.5	7.7	38.5	34.1

Note: The percentages add up to more than 100 because of multiple responses

8.1.2 Utensil to Cook Food

Aluminum utensils still surfaced as the most widely used for cooking purposes with 62% of total 1160 respondents mentioning it. IFA and cast-IFA utensils had also maintained their position as utensils extensively used for cooking *dal*(lentil soup) or *tarkari* (curry).

Table 55: Utensil Used to Cook Food

	Round 1			Round 2		
For cooking Dal and Tarkari	**COM A**	**COM B**	**COM C**	**COM A**	**COM B**	**COM C**
Base : All	**520**	**318**	**322**	**520**	**320**	**320**
	%	**%**	**%**	**%**	**%**	**%**
Aluminum	80.2	50.6	76.4	48.8	61.6	83.7
Cast IFA	29.6	14.2	14.3	39	9.1	15.9
IFA	15.8	35.2	10.6	17.9	58.8	0.6
Bronze	-	-	-	7.7	6.3	0.3
Copper	-	-	-	-	2.5	-
Brass utensil	-	-	-	-	5.0	-

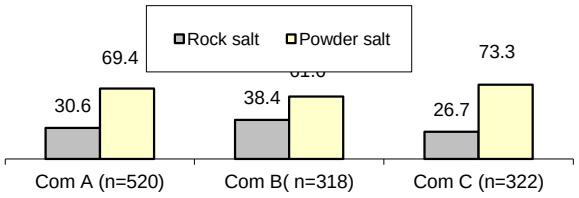
Note: The percentages add up to more than 100 because of multiple responses

8.1 Salt

8.1.3 Type of Salt Used

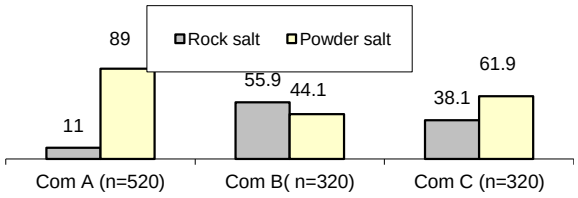
It was observed that both powder and rock salt were used by pregnant and post partum women. Powder salt seemed more in use in Com A (89%) than in other components (Com B: 44.1%, Com C: 61.9%). Compared to the previous round, consumption of powder salt seemed to have declined in Com B and Com C. It was further seen that most of the powder salt being used by the respondents came in packets. *(Figure 9)*

Round 1



Type of salt used		Com A	Com B	Com C
	N=	520	318	322
Rock Salt (%)		30.6	38.4	26.7
Powdered Salt (%)		69.4	61.6	73.3
N= Those using powdered salt		**361**	**196**	**236**
In packet		96.7	100	99.2

Round 2



Type of salt used		Com A	Com B	Com C
	N=	520	318	322
Rock Salt (%)		11	55.9	38.1
Powdered Salt (%)		89	44.1	61.9
N= Those using powdered salt		**463**	**141**	**198**
In packet		100	99.3	76.8

Figure 9: Type of Salt Used

8.1.4 Brand of Salt Used

"Aayo" stood out as a very widely used salt brand in all three components. It was seen to have been predominantly used in Com C, whereas, in Com A and Com B, "Bhanu" featured as the next widely used brand. It was however seen that a much wider variety of salt brands were used in Com A than in the other components; which could be due to geographical reasons. "Shakti" was another popular brand in Com B.

Table 56: Brand of Salt Used

	Round1				Round 2			
	All	**Com A**	**Com B**	**Com C**	**All**	**COM A**	**COM B**	**COM C**
Base : Those using packet salt	**779**	**349**	**196**	**234**	**755**	**463**	**140**	**152**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Aayo	71.6	73.4	36.2	98.7	49.4	43	30.7	86.2
Bhanu	7.7	0.9	29.1	-	16.7	12.5	47.9	0.7
Baba	7.6	8.3	15.3	-				
Shakti	5.4	10.3	2.6	0.4	4.8	2.2	18.6	0.0
Super Aayo	0.5	1.1	-	-	0.3	0.2	0.7	0.0
Others	0.3	0.6	-	-	21.0	33.2	0.0	3.3
Could not respond	6.8	5.4	16.3	0.9	7.8	8.9	2.1	9.9
On direct observation								
Showed the packet	80.2	73.4	88.3	83.8	67.1	74.5	88.6	25.0
Could not show the packet	19.8	26.6	11.7	16.2	32.9	25.5	11.4	75.0

8.1.5 Awareness of Two Children Logo

After making sure that the salt packets being used by the respondents carried the two-child logo, the women were asked whether they had noticed the logo. *Table 57* shows that majority of the respondents in Com B and Com C had noticed the logo of two children on the wrapper of the salt they use. However, awareness for the same was low among respondents from Com A. The lower level of awareness of two-child logo in Com A could be due to the use of a very wide range of salt brands there. The situation was similar in the previous round as well.

Table 57: Awareness of Two - Child Logo

	Round 1				Round 2			
	All	**Com A**	**Com B**	**Com C**	**All**	**COM A**	**COM B**	**COM C**
Base : Using packet salt	**779**	**349**	**196**	**234**	**755**	**463**	**140**	**152**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Yes	81.8	67.0	94.4	93.2	53.9	45.8	89.3	46.1
No	18.2	33.0	5.6	6.8	21.3	32.8	3.6	2.6
Unable to see	-	-	-	-	24.8	21.4	7.1	51.3

8.1.6 Recommendation of Salt Usage

Table 58 shows that a large number of women had not received advice on salt usage from others; even though more women reported to have received advice than in previous round, advice they mostly received were (1) to use powder salt of packet, and (2) to use the salt with two-child logo on the packet. FCHVs were still seen as the most active ones in giving advice on salt usage to the respondents. In Com C, however, more women reported to have received the advice from health facilities and radio, rather than FCHVs.

Table 58: Recommendation of Salt Usages

	Round 1				Round 2			
	All	**Com A**	**Com B**	**Com C**	**All**	**COM A**	**COM B**	**COM C**
Base :	**1160**	**520**	**318**	**322**	**1160**	**520**	**320**	**320**
Advised received	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Yes	25.1	33.3	22.6	14.3	32.7	40.6	30.6	21.9
No	73.8	66.7	77.4	81.7	65.8	57.1	68.8	76.9
Could not respond					1.5	2.3	0.6	1.2
Base : Those advised	**291**	**173**	**72**	**46**	**379**	**211**	**98**	**70**
Types of advise received	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
For the use of the salt with the two-child logo on the packet	50.8	43.9	77.8	34.8	69.1	73.9	72.5	50.0
For the use of powder form salt in packet	49.1	56.1	22.2	65.2	29.0	24.2	24.5	50.0
For the use of salt containing iodin	-	-	-	-	4.7	1.9	3.0	15.7
Advice give by								
FCHVs	44.0	59.5	29.2	8.7	56.7	63.5	70.4	17.2
Radio	26.5	21.4	40.3	23.9	8.7	1.4	11.2	27.2
Family member	11.7	13.9	8.3	8.7	3.5	4.3	0.0	5.7
Health facility	11	2.9	16.7	32.6	15.0	13.3	9.2	28.6
MCHWs	8.9	8.7	9.7	8.7	12.6	13.7	13.3	8.6
Neighbour	6.5	7.5	2.8	8.7	6.3	5.2	4.1	12.9
Friend/ Relative	6.2	4	1.4	21.7	1.9	0.5	1.0	7.2
Private Doctor/Clinic	4.1	2.9	6.9	4.3	5.8	3.8	14.3	0.0
Teacher	4.1	4.6	2.8	4.3	3.1	0.9	4.1	8.6
Continue ….								
TV	2.7	3.5	2.8	-	1.8	1.4	2.0	2.9

VHW					0.8	0.9	1.0	0.0
People doing surveys					0.8	1.4	0.0	0.0

Note: The percentages add up to more than 100 because of multiple responses

8.1.7 Iodine Content

In order to assess the iodine content of the salt being used by the respondents, interviewers tested iodine content using the chemical reagents. The test involved placing a drop of test solution onto a small amount of salt used by the respondents, the night preceding the survey. Test kits were supplied by the MI containing three ampoules; two with test solution and one with recheck solution. If the salt is alkaline or mixed with alkaline free flow agents, solution does not show the iodine content. In such a situation, recheck solution followed with test solution assessed the iodine content. During the test it was observed that salt being used by almost half of the respondents had iodine content of more than 15ppm, whereas only a small number of tests showed salt with zero iodine content. *(Table 59)*

Table 59: Iodine Content

	Round 1				Round 2			
	All	**Com A**	**Com B**	**Com C**	**All**	**COM A**	**COM B**	**COM C**
Base : All	**1160**	**520**	**318**	**322**	**1160**	**520**	**320**	**320**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**
0 P.P.M.	17.9	21.9	28.6	0.9	7.8	3.3	15.6	7.2
Less than 15 P.P.M.	27.8	29	23.9	29.5	35.9	29.6	39.7	42.2
More than 15 P.P.M.	54.3	49	47.5	69.6	56.4	67.1	44.7	50.6

'Aayo' and 'Bhanu' were clearly the salt brands having high IFA contents.

Table 58: Iodine Content by brand

	Aayo	**Bhanu**	**Baba**	**Shakti**	**Super Aayo**	**Rich**
Base : Those using packet salt	**558**	**60**	**59**	**42**	**4**	**2**
	%	**%**	**%**	**%**	**%**	**%**
0 P.P.M.	3.4	6.7	18.6	-	-	50
Less than 15 P.P.M.	10.6	6.7	30.5	57.1	-	50
More than 15 P.P.M.	86	86.7	50.8	42.9	100	-

Chapter 9: Health workers/ Volunteers

This chapter describes the general background of health workers/volunteers from all three component districts, along with (1) their knowledge, attitude, and perception reg of various critical issues that need to be addressed during and after pregnancy; arding safe motherhood practices; (2) their level of understanding and (3) their level of involvement in the process of providing assistance to pregnant and post-partum women. The respondents were Female Community Health Volunteers (FCHVs), Maternal Child Health Workers (MCHWs) and Village Health Workers (VHWs). A total of 305 health workers/volunteers were interviewed, using a structured questionnaire.

9.1 Demographic Characteristics of Health Workers/Volunteers

As far as age of the health workers/volunteers is concerned, most were between 20-50 years *(Table 60)*. On comparing the educational backgrounds of the three different types of health workers/volunteers, MCHWs and VHWs were found to have a higher literacy rate than FCHVs. It could also be seen that FCHVs and MCHWs were predominantly female whereas males constituted a greater portion of the VHWs.

Table 60: Demographics of the health workers

	Component A				Component B				Component C			
	All	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**
Base : All	**103**	**40**	**33**	**30**	**110**	**40**	**39**	**31**	**92**	**40**	**27**	**25**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Age												
15-20 yrs	2.9	5	3	-	2.7	2.5	2.6	3.2	-	-	-	-
21-25 yrs	7.8	12.5	3	6.7	13.6	15	12.8	12.9	9.8	12.5	7.4	8
26-30 yrs	9.7	15	12.1	-	17.3	30	10.3	9.7	8.7	12.5	7.4	4
31-35 yrs	18.4	15	27.3	13.3	13.6	12.5	23.1	3.2	13	17.5	11.1	8
36-40 yrs	21.4	27.5	30.3	3.3	17.3	17.5	17.9	16.1	23.9	15	48.1	12
41-45 yrs	15.5	12.5	18.2	16.7	22.7	20	25.6	22.6	12	15	14.8	4
46-50 yrs	7.8	7.5	6.1	10	5.5	2.5	5.1	9.7	14.1	10	7.4	28
50 yrs +	16.5	5	-	50	7.3	-	2.6	22.6	18.5	17.5	3.7	36
Gender												
Male	21.4	2.5	-	70	23.6	-	-	83.9	23.9	-	-	88
Female	78.6	97.5	100	30	76.4	100	100	16.1	76.1	100	100	12
Education												
No formal education	5.8	15	-	-	13.6	37.5	-	-	14.1	32.5	-	-
Class 1	-	-	-	-	1.8	5	-	-	-	-	-	-
Class 2	1	2.5	-	-	1.8	5	-	-	3.3	7.5	-	-
Class 3	2.9	7.5	-	-	1.8	5	-	-	-	-	-	-
Class 4	2.9	7.5	-	-	1.8	5	-	-	1.1	2.5	-	-
Class 5	2.9	7.5	-	-	5.5	15	-	-	4.3	10	-	-
Class 6	3.9	10	-	-	0.9	2.5	-	-	-	-	-	-
Class 7	1.9	5	-	-	0.9	2.5	-	-	2.2	5	-	-
Class 8	15.5	20	18.2	6.7	10	7.5	17.9	3.2	16.3	10	29.6	12
Class 9	8.7	7.5	3	16.7	6.4	7.5	7.7	3.2	10.9	15	7.4	8
SLC	46.6	10	75.8	63.3	41.8	7.5	53.8	71	40.2	17.5	51.9	64
Intermediate	-	-	-	-	1.8	-	-	6.5	1.1	-	-	4
Bachelor	5.8	5	3	10	10.9	-	20.5	12.9	2.2	-	7.4	-
Master	1	-	-	3.3	0.9	-	-	3.2	4.3	-	3.7	12

Note: The percentages add up to more than 100 because of multiple responses

9.2 Knowledge, Attitude and Perception

9.2.1 Additional Care for Pregnant Women

During the survey, all FCHVs, MCHWs and VHWs opined that women need additional care during pregnancy. The reported reasons for addition care were: "for good health of mother (Com A: 91.3%, Com B: 78.2%, Com C: 82.6%)", "for good health of child (Com A: 80.6%, Com B: 69.1%, Com C: 52.2%)", "to avoid potential problems (Com A: 51.5%, Com B: 45.5%, Com C: 53.3%)" and "for safe delivery (Com A: 32%, Com B: 38.2%, Com C: 65.2%)". *(Table 61)*

When they were asked about the kind of additional care needed during pregnancy, more than half of the health workers/volunteers reported intake of nutritious food, taking rest, intake of IFA supplementation, going for regular check-ups, avoiding heavy work, and taking TT injection as some of the most important types of additional care. Upon probing, staying hygienic and taking albendazole for de-worming also appeared in the survey as reported ways to take additional care. *(Table 61a)*

Knowledge, attitude, and perception regarding this issue were found to be similar to what existed during the previous round and no differences were noticed between the three different components.

Table 61: Additional care for pregnant women

	Com A				Com B				Com C			
	All	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**
Base : All	**120**	**39**	**41**	**40**	**120**	**40**	**40**	**40**	**120**	**40**	**39**	**41**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Additional care needed												
Round 1	100	100	100	100	100	100	100	100	100	100	100	100
Round 2	100	100	100	100	100	100	100	100	100	100	100	100

Table 61a: Reason for taking additional care for pregnant women

	Round 1			Round 2		
	Com A	**Com B**	**Com C**	**Com A**	**Com B**	**Com C**
Why additional care needed	**120**	**120**	**120**	**103**	**110**	**92**
	%	**%**	**%**	**%**	**%**	**%**
For safe delivery	69.2	50.8	40.0	32	38.2	65.2
For good health of child	62.5	71.7	87.5	91.3	78.2	82.6
For good health of mother	60.8	79.2	88.3	80.6	69.1	52.2
To avoid any kind of problem	48.3	47.5	24.2	51.5	45.5	53.3
Others	3.3	2.4	1.6	-	-	-
What kind of Additional care						
Eat nutritious food	88.3	90.8	96.7	88.3	91.8	92.4
Take IFA supplementation	67.5	69.2	34.2	71.8	65.5	59.8
Take rest	60.8	83.3	85.8	82.5	72.7	45.7
Avoid heavy work	54.2	66.7	50	63.1	44.5	34.8
Should go for regular check-up	83.3	100	89.1	67	60	68.5
Take TT injection	21.7	46.7	23.3	43.7	38.2	37
To know the condition of fetus	8.3	21.7	9.2	10.7	14.5	20.7
Focus on sanitation	8.3	4.2	1.7	3.9	4.5	3.3
Take de-worming tablets	6.7	7.5	3.3	4.9	12.7	1.1
To know if she has any problem	4.2	10	5.8	7.8	2.7	10.9
Stay Hygienic				2.9	10	9.8

****Note: The percentages add up to more than 100 because of multiple responses***

9.2.2 Antenatal Check-Up During Pregnancy

During the investigation, a sweeping majority of health workers/volunteers (Com A: 99%, Com B: 97.3% and Com C: 97.8%) reported that a pregnant woman should go for four antenatal check-ups. When they were further asked where pregnant women could go for antenatal check-ups, sub-health posts emerged as the most mentioned place; followed by health posts, hospitals, and outreach clinics. It was observed that more health workers/volunteers mentioned hospitals and private doctors/clinics in Com A than in other components.

Table 62: Knowledge on Antenatal Check-Up During Pregnancy

	Com A				Com B				Com C			
	All	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**
Base : All Respondents	**103**	**40**	**33**	**30**	**110**	**40**	**39**	**31**	**92**	**40**	**27**	**25**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Required Nos of general check up												
Three	-	-	-	-	0.9	2.5	-	-	1.1	2.5	-	-
Four	99	97.5	100	100	97.3	92.5	100	100	97.8	97.5	100	96
Five	1	2.5	-	-	1.8	5	-	-	1.1	-	-	4
Average no. of	4.01	4.03	4	4	4.01	4.03	4	4	4	3.97	4	4.04
Place for General check up												
Sub-Health post	88.3	90	87.9	86.7	84.5	80	92.3	80.6	77.2	70	88.9	76
Health post	76.7	65	84.8	83.3	50.9	52.5	46.2	54.8	56.5	60	55.6	52
Hospital	76.7	70	84.8	76.7	37.3	32.5	35.9	45.2	29.3	30	22.2	36
Out reach clinic	29.1	15	36.4	40	46.4	27.5	61.5	51.6	39.1	27.5	55.6	40
Private Doctor/Clinic	45.6	40	48.5	50	11.8	12.5	15.4	6.5	3.3	5	-	4
MCHW	1.9	2.5	3	-	9.1	5	15.4	6.5	3.3	2.5	3.7	4
FCHV	2.9	2.5	-	6.7	5.5	2.5	5.1	9.7	3.3	5	3.7	-
VHW	-	-	-	-	2.7	2.5	-	6.5	4.3	2.5	-	12
Pharmacy	-	-	-	-	7.3	7.5	10.3	3.2	1.1	2.5	-	-
TBA	-	-	-	-	0.9	-	2.6	-	1.1	-	3.7	-

****Note: The percentages add up to more than 100 because of multiple responses***

9.3 Awareness of Anemia

It was observed that except a small proportion of FCHVs, all MCHWs and VHWs were well aware of anemia in all three components *(Table 63).* The awareness level was observed to be similarly high in baseline study as well. Nevertheless, the level of anemia awareness seems to have risen slightly for the FCHVs in Com B.

Table 63: Awareness of Anemia

	COM A	FCHV	MCH W	VHW	COM B	FCHV	MCHW	VHW	COM C	FCHV	MCHW	VHW
Round 1												
N=All	**120**	**39**	**41**	**40**	**120**	**40**	**40**	**40**	**120**	**40**	**39**	**41**
Yes (%)	**96.7**	94.9	97.6	97.5	95	85	100	100	94.2	82.5	100	100
No (%)	3.3	5.1	2.4	2.5	5	15	0	0	5.8	17.5	0	0
Round 2												
N=All	**103**	**40**	**33**	**30**	**110**	**40**	**39**	**31**	**92**	**40**	**27**	**25**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Yes (%)	99.0	97.5	100.0	100.0	97.3	92.5	100.0	100.0	92.4	82.5	100.0	100.0
No (%)	1.0	2.5	0.0	0.0	2.7	7.5	0.0	0.0	7.6	17.5	0.0	0.0

9.3.1 Knowledge of Anemia among Health Workers/Volunteers

When probed to find out what health workers/volunteers understood with anemia, majority of them mentioned less quantity of blood in the body as the meaning of anemia (Com A: 97 %, Com B: 87.3%, Com C: 86.9%), followed by dizziness/weakness, and yellowing and dryness of face. Most of them also reported "death of mother due to loss of blood" as the major consequence of anemia (Com A: 91.3 %, Com B: 83.7%, Com C: 72.8%). Consistent with the previous round, taking IFA-rich food and IFA supplements were reported by equally high majority as a way to prevent anemia.

A large majority of health workers/volunteers mentioned that pregnant women can be protected from anaemia by taking adequate IFA rich food (Com A: 93.2 %, Com B: 92.7% and Com C: 85.8%). Half or mores than half of them were also of the opinion that pregnant women can be protected from anaemia by taking IFA supplements (Com A: 53.4 %, Com B: 50 % and Com C: 69.6%). *(Table 64)*

Table 64: Knowledge of Anemia among Health Workers/Volunteers

	Com A				Com B				Com C			
	All	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**
Base : All	**103**	**40**	**33**	**30**	**110**	**40**	**39**	**31**	**92**	**40**	**27**	**25**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Knowledge												
Lack of blood	97.0	95.0	100.0	96.7	87.3	82.5	89.7	90.3	86.9	82.5	88.9	92.0
Dizziness/ Weakness	20.4	25.0	30.3	3.3	35.4	37.5	30.8	38.7	25.0	22.5	22.2	32.0
Paleness and dryness	32.1	32.5	39.4	23.3	25.5	15.0	35.9	25.8	20.7	7.5	33.3	28.0
IFA deficiency	31.1	30.0	30.3	33.3	21.8	27.5	25.6	9.7	26.1	20.0	29.6	32.0
Low haemoglobin level	32.1	7.5	42.4	53.3	16.3	10.0	23.1	16.1	11.9	5.0	14.8	20.0
Sleepiness/ Lethargy	4.9	2.5	9.1	3.3	8.2	5.0	15.4	3.2	4.3	5.0	3.7	4.0
Numbness of hands and feet	2.9	2.5	3.0	3.3	4.6	-	7.7	6.5	6.6	7.5	11.1	-
Could not respond	-	-	-	-	1.8	5.0	-	-	-	-	-	-
Consequences												
Death of mother	91.3	85.0	93.9	96.7	83.7	77.5	84.6	90.3	72.8	62.5	85.2	76.0
Miscarriage	49.5	55.0	39.4	53.3	25.5	22.5	28.2	25.8	40.2	22.5	51.9	56.0
Birth of anemic or malnourished baby	33.0	27.5	39.4	33.3	28.2	15.0	35.9	35.5	47.9	22.5	48.1	88.0
Lack of energy	33.0	32.5	45.5	20.0	26.4	27.5	30.8	19.4	30.4	25.0	44.4	24.0
Birth of underweight baby	31.1	27.5	36.4	30.0	25.5	15.0	35.9	25.8	14.1	10.0	18.5	16.0
Could not respond	2.9	7.5	-	-	5.4	10.0	2.6	3.2	5.5	12.5	-	-
Prevention												
Should take IFA rich food	93.2	87.5	97.0	96.7	92.7	82.5	100.0	96.8	85.8	72.5	96.3	96.0
Should take IFA supplements	53.4	40.0	66.7	56.7	50.0	42.5	53.8	54.8	69.6	45.0	88.9	88.0
Protect take care of parasitic infection	30.1	15.0	36.4	43.3	20.9	15.0	25.6	22.6	26.1	-	37.0	56.0
Protect from Malaria and Kalazar	2.9	2.5	3.0	3.3	0.9	-	-	3.2	-	-	-	-
Could not respond	2.9	7.5	-	-	1.8	5.0	-	-	5.5	10.0	-	4.0

****Note: The percentages add up to more than 100 because of multiple responses***

9.3.2 Practice of Providing Safe Motherhood Service/Suggestion for general Check-Up

The survey data revealed that all health workers and volunteers from all three components have been providing suggestions and various services related to safe motherhood *(Table 65)*. Most of them had been providing suggestions and services like: IFA intake, antenatal care, postnatal care, nutrition, Vitamin A intake, advice for de-worming tablets, etc. Other cited suggestions and services that are being provided by health workers/volunteers are included in the table.

An overriding majority (Com A: 100%, Com B: 95.4% and Com C: 89.1%) of health workers/volunteers reported that they had been suggesting pregnant women to go for four antenatal check-ups; just as in the previous year. Similarly, it could be observed this year again that all the health workers and volunteers had been suggesting all post partum mothers to give colostrums to newborn baby, i.e. feed the new born with the yellow milk of the mother.

Table 65: Practice of providing safe motherhood service / suggestion for general check up

	Com A				Com B				Com C			
	All	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**
Base : All	**103**	**40**	**33**	**30**	**110**	**40**	**39**	**31**	**92**	**40**	**27**	**25**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
IFA intake	81.6	75	75.8	96.7	66.4	80	64.1	51.6	59.8	65	59.3	52
ANC	78.6	80	84.8	70	61.8	67.5	69.3	45.2	70.7	65	85.2	64
PNC	64.1	67.5	66.7	56.7	51.8	47.5	56.4	51.6	54.3	40	66.7	64
Nutrition	46.6	50	39.4	50	50.9	47.5	53.9	51.6	58.7	62.5	37	76
Intake of Vitamin A	45.6	37.5	57.6	43.3	29.1	32.5	28.2	25.8	22.8	17.5	29.6	24
Advice to take Deworming Tablets	35.9	17.5	51.5	43.3	32.7	40	25.6	32.3	21.7	20	33.3	12
IEC	29.1	12.5	39.4	40	30.0	27.5	41.0	19.4	17.4	12.5	22.2	20
Delivery	18.4	15	27.3	13.3	24.6	12.5	38.5	22.6	27.2	15	29.6	44
Counseling	6.8	5	12.1	3.3	30.9	12.5	43.6	38.7	34.8	27.5	37	44
Referral	2.9	-	6.1	3.3	1.8	-	5.2	-	4.3	5	7.4	-
Vaccination program	2.9	-	3	6.7	6.3	2.5	5.2	12.9	1.1	-	-	4
Suggestion for general check up on pregnancy												
3 times	-	-	-	-	1.8	2.5	-	3.2	1.1	2.5	-	-
4 times	100	100	100	100	95.4	92.5	97.4	96.8	89.1	87.5	88.9	92
5 times	-	-	-	-	0.9	2.5	-	-	1.1	-	3.7	-
6 times	-	-	-	-	0.9	2.5	-	-	6.5	7.5	7.4	4
9 times	-	-	-	-	-	-	-	-	2.2	2.5	-	4
Average	4	4	4	4	4.01	4.05	4	3.97	4.24	4.25	4.19	4.28

****Note: The percentages add up to more than 100 because of multiple responses***

9.3.3 Suggestions Provided for Special Care During Pregnancy

It was observed during the survey that health workers/volunteers had been providing various suggestions to the pregnant women regarding the special care needed during pregnancy. More than half of them had been providing suggestions like going for regular check-ups, taking adequate rest, taking IFA tablets, taking adequate food, and avoiding heavy work *(Table 66)*.

Compared to previous round, regular health check-up emerged as a more frequently-appearing suggestion in all three components. Similarly, in Com C, more health workers/volunteers were suggesting the intake of IFA tablets. Avoiding heavy work also appeared more frequently in Com A and Com C.

Table 66: Suggestion Provided for Special Care during Pregnancy

	Round 1			Round 2		
	Com A	**Com B**	**Com C**	**Com A**	**Com B**	**Com C**
Base : All	**120**	**120**	**120**	**103**	**110**	**92**

	%	%	%	%	%	%
Adequate food	70.8	76.7	84.2	65	65.5	67.4
Take IFA tablets	65.8	70	34.2	65	66.4	69.6
Adequate rest	60.8	65	93.3	70.9	70.9	63
Regular check-up	57.5	65	56.7	73.8	73.6	67.4
Avoid heavy work	23.3	57.5	12.5	54.4	54.5	53.3
Good envIFAment	20.8	20.8	6.7	51.5	31.8	38
Avoid long journey	15.8	38.3	16.7	3.9	10.9	13
Good envIFAment	-	-	-	16.5	7.2	18.5
De-worming treatment	14.2	27.5	8.3	10.7	24.6	13
Avoid alcohol	-	-	-	12.6	14.6	9.8
Encourage to take salt with two-child logo)	-	-	-	4.9	10.0	10.9
Psychological support	-	-	-	1.9	0.9	2.2
Avoid tea and coffee	-	-	-	1	-	1.1
Go for Vaccination	-	-	-	3.9	15.5	1.1

Note: The percentages add up to more than 100 because of multiple responses

9.3.4 Practice of Diagnosing Anemia

Health workers/Volunteers were questioned about the methods they had been using to identify anemia among pregnant women. An overriding majority (Com A: 81.6%, Com B: 72.8% and Com C: 76.1%) of the health workers/volunteers reported that they would examine the color of pregnant woman's palms, nails, lower eyelids and the lower part of the tongue. This was followed by other methods such as enquiring about the symptoms of dizziness and tiredness (Com A: 55.4%, Com B: 39.1% and Com C: 52.2%) and testing the amount of haemoglobin in the blood (Com A: 14.6%, Com B: 13.6% and Com C: 10.9%). *(Table 67)* A small proportion of FCHVs in all three components and some MCHWs and VHWs in Com B mentioned that they did not know or could not say how they diagnosed anemia.

Interestingly, for both Com B and Com C, it seems that FCHVs' knowledge on anemia identification has diminished when compared with the previous round; i.e. before the introduction of the intensification program.

Table 67: Diagnosing Anemia

	Com A				Com B				Com C			
	All	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**
Round 1												
Base : All	**120**	**39**	**41**	**40**	**120**	**40**	**40**	**40**	**120**	**40**	**39**	**41**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
On checking the color of palms, nails, eyelids, underside of the tongue	91.4	78.4	97.5	97.4	91.2	79.4	97.5	95	85	69.7	92.3	90.2
Checking the symptoms like dizziness and/or fatigue	-	-	-	-	59.6	67.6	60	52.5	62.8	63.6	59	65.9
Checking the level of hemoglobin in blood	21.6	16.2	22.5	25.6	8.8	5.9	7.5	12.5	5.3	3	10.3	2.4
Round 2												
Base : All	**103**	**40**	**33**	**30**	**110**	**40**	**39**	**31**	**92**	**40**	**27**	**25**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Testing the color of a pregnant woman's palms, nails, eyelids, underside of the tongue	81.6	62.5	93.9	93.3	72.8	55.0	87.2	77.4	76.1	47.5	96.3	100.0
Asking symptoms like dizziness and/or fatigue among pregnant woman	55.4	67.5	54.5	40.0	39.1	40.0	46.2	29.0	52.2	45.0	48.1	68.0

Testing the level of hemoglobin in blood	14.6	5.0	27.3	13.3	13.6	2.5	20.5	19.4	10.9	5.0	18.5	12.0
Could not respond	4.9	12.5	-	-	9.0	15.0	2.6	9.7	9.8	22.5	-	-

Note: The percentages add up to more than 100 because of multiple responses

9.3.4 Suggestion Provided to Pregnant Women Suffering from Anemia

When those health workers/volunteers who had met women with anemia were further asked about the suggestion they provide to pregnant women suffering from anemia, it was observed that most of the health workers/volunteers suggest them to visit health facility (Com A: 90.5% , Com B: 68.6% and Com C: 68.0%), to take IFA rich food (Com A: 57.1% , Com B: 74.5% and Com C: 72.0%) and to take IFA tablets (Com A: 52.4% , Com B: 72.5% and Com C: 64.0%). *(Table 68)*

Table 68: Suggestion Provided to Pregnant Women Suffering from Anaemia

	Round 1			Round 2		
	Com A	**Com B**	**Com C**	**Com A**	**Com B**	**Com C**
Base : Those who have met	**63**	**51**	**25**	**48**	**36**	**34**
	%	**%**	**%**	**%**	**%**	**%**
To visit health facility	90.5	68.6	68	72.9	75	55.9
To take IFA rich food	57.1	74.5	72	73	50	91.6
To take IFA tablets	52.4	72.5	64	64.6	66.7	61.8
To take rest	17.5	49	8	18.8	30.6	44.1
De-worming	9.5	29.4	8	18.8	11.1	26.5
To intake green vegetables	7.9	5.9	4	-	-	-
To contact first aid center	-	-	-	-	2.8	-
Go to health post for delivery	-	-	-	-	-	2.9
To take iodized salt	-	-	-	-	2.8	-

Note: The percentages add up to more than 100 because of multiple responses

9.3.4 Distribution of IFA Supplementation to Pregnant Women

With regard to distribution of IFA supplementation, all MCHWs and majority of VHWs from all three components had, at some time, distributed IFA tablets to pregnant women. Similarly, all FCHVs of Com A and Com B had been involved in distribution of IFA supplementation. However, the involvement of FCHVs in Com C was quite low. The case in Com C was similar to last round but the proportion of FCHVs involved in IFA tablets' distribution had declined even further this year.

Majority of health workers/volunteers who had been involved in IFA tablets' distribution mentioned that they had been involved in the task quite frequently *(Table 69)*.

Table 69: Distribution of IFA Supplementation to Pregnant Women

	Com A				Com B				Com C			
Round 1	**All**	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**
Base : All	**120**	**39**	**41**	**40**	**120**	**40**	**40**	**40**	**120**	**40**	**39**	**41**
Ever Distributed %	100	100	100	100	92.5	80	100	97.5	84.2	55	100	97.6
How often involved in the task within last one year												
Base:	**120**	**39**	**41**	**40**	**111**	**32**	**40**	**39**	**101**	**22**	**39**	**40**
Always (%)	76.7	97.4	75.6	57.5	52.3	56.3	57.5	43.6	83.2	63.6	92.3	85
Frequently (%)	0.8	-	2.4	-	39.6	31.3	37.5	48.7	10.9	22.7	7.7	7.5
Sometime (%)	14.2	2.6	22	17.5	7.2	9.4	5	7.7	5.9	13.6	-	7.5
Rarely (%)	8.3	-	-	25	0.9	3.1	-	-				
Round 2												
Base : All	**103**	**40**	**33**	**30**	**110**	**40**	**39**	**31**	**92**	**40**	**27**	**25**
Ever Distributed (%)	98.1	100	100	93.3	99.1	100	100	96.8	72.8	37.5	100	100
How often involved in the task within last one year												
Base	**101**	**40**	**33**	**28**	**109**	**40**	**39**	**30**	**67**	**15**	**27**	**25**
Always (%)	57.4	62.5	72.7	32.1	65.1	75	69.2	46.7	40.3	6.7	55.6	44
Frequently (%)	27.7	12.5	27.3	50	22	15	28.2	23.3	38.8	33.3	44.4	36

Sometime (%)	7.9	7.5	-	17.9	11.9	7.5	2.6	30	13.4	33.3	-	16
Rarely (%)	6.9	17.5	-	-	0.9	2.5	-	-	7.5	26.7	-	4

9.3.5 Adverse Effect of IFA

Although 65.8 percent of health workers/volunteer from component A mentioned that they had received complaints regarding IFA tablets from pregnant and post partum women, only 39.6 percent from component B and 44.6 percent from component C mentioned so. In response to a question about the complaints they get from pregnant and post partum women regarding IFA tablets, most of the health workers/volunteers reported that pregnant/post partum women complain about nausea and black stool. *(Table 70 / Table 71)*

Table 70: Complaints heard from pregnant/ Post partum women

		Round 1		Round 2	
		Base : All	Complaints ever received (%)	**Base : All**	Complaints ever received (%)
Com A	All	**120**	65.8	**103**	45.6
	FCHVs	**39**	66.7	**40**	32.5
	MCHWs	**41**	73.2	**33**	63.6
	VHWs	**40**	57.5	**30**	43.3
Com B	All	**120**	39.6	**110**	57.3
	FCHVs	**40**	34.4	**40**	40
	MCHWs	**40**	52.5	**39**	74.4
	VHWs	**40**	30.8	**31**	58.1
Com C	All	**120**	44.6	**92**	46.8
	FCHVs	**40**	36.4	**40**	15
	MCHWs	**39**	53.8	**27**	81.5
	VHWs	**41**	40	**25**	60

Note: The percentages add up to more than 100 because of multiple responses

Table 71: Complaints received

	Round 1			Round 2		
	Com A	**Com B**	**Com C**	**Com A**	**Com B**	**Com C**
Base : Those received complaints	**79**	**44**	**45**	**47**	**63**	**43**
	%	**%**	**%**	**%**	**%**	**%**
Nausea	73.4	40.9	68.9	61.7	54	41.9
Black Stool	55.7	75	64.4	53.2	68.3	53.5
Bad Breath	19	25	37.8	12.8	23.8	23.3
Stomach flatulence	17.7	27.3	35.5	23.4	17.5	27.9
Dizziness	13.9	2.3	-	-	4.8	-
Loss of appetite	7.6	9.1	-	2.1	3.2	-
Diarrhoea	6.3	13.6	-	12.8	3.2	-
Bad taste	-	-	-	2.1		-
Constipation	-	-	-	8.5	3.2	-
Headache	-	-	-	2.1	1.6	-
Dryness in mouth	-	-	-	2.1	-	-
Indigestion of food	-	-	-	2.1	-	-
Swelling of body	-	-	-	-	1.6	-

Note: The percentages add up to more than 100 because of multiple responses

9.3.6 Knowledge on Side Effects of IFA Tablet

When asked about the side effects of IFA tablet, most of the health workers/volunteers answered black stool as the major side effect (Com A: 67% Com B: 68.2% and Com C: 42.4%) followed by nausea (Com A: 58.3%, Com B: 42.7% and Com C: 17.4%). Lesser proportion of health workers/volunteers reported other side effects compared to previous round. Similarly, a small

proportion of health workers/volunteers in all three components seemed to lack knowledge on side effects of IFA tablet; suggesting the need to enhance their knowledge. Compared to other components, FCHVs in Com C seemed to have lower level of knowledge on side effects of IFA tablets – 70% of them answered Don't Know/Can't Say. *(Table 72)*

Table 72: Knowledge on side effects of IFA Tablet

Round 2	Com A				Com B				Com C			
	All	FCHVs	MCHWs	VHWs	All	FCHVs	MCHWs	VHWs	All	FCHVs	MCHWs	VHWs
Base : All	**103**	**40**	**33**	**30**	**110**	**40**	**39**	**31**	**92**	**40**	**27**	**25**
	%	%	%	%	%	%	%	%	%	%	%	%
Black stool	67	70	66.7	63.3	68.2	67.5	74.4	61.3	42.4	20	59.3	60
Nausea	58.3	62.5	57.6	53.3	42.7	57.5	41	25.8	17.4	10	33.3	12
Abdominal pain	12.6	12.5	12.1	13.3	11.8	17.5	12.8	3.2	8.7	-	18.5	12
Bad Breath/ Loss of appetite	9.7	7.5	6.1	16.7	16.4	17.5	17.9	12.9	3.3	5	3.7	-
Constipation	13.6	7.5	18.2	16.7	7.3	-	7.7	16.1	9.8	-	22.2	12
Dizziness	14.6	17.5	15.2	10	9.1	10	10.3	6.5	2.2	-	-	8
Diarrhoea	11.7	12.5	9.1	13.3	2.7	2.5	2.6	3.2	-	-	-	-
Itchiness	2.9	5	3	-	3.6	5	-	6.5	1.1	2.5	-	-
Heating up of body	-	-	-	-	-	-	-	-	2.2	2.5	3.7	-
COULD NOT RESPOND	13.6	17.5	9.1	13.3	12.7	10	7.7	22.6	43.5	70	18.5	28

Note: The percentages add up to more than 100 because of multiple responses

9.3.7 Benefits of IFA Tablet

When health workers/volunteers were inquired about the benefits of IFA tablet for pregnant woman, majority of them reported that IFA tablets increase the quantity of blood (Com A: 97.1%, Com B: 89.1%, Com C: 89.1%). Other reported benefits were improvement in the health of mother and child, prevention from anemia, and increased energy in the mothers' body. Interestingly, a few responses were found where health workers/volunteers mentioned prevention from night blindness as a benefit of taking IFA tablets.

Table 73: Benefits of IFA Tablet

Round 2	Com A				Com B				Com C			
	All	FCHVs	MCHWs	VHWs	All	FCHVs	MCHWs	VHWs	All	FCHVs	MCHWs	VHWs
Base : All	**103**	**40**	**33**	**30**	**110**	**40**	**39**	**31**	**92**	**40**	**27**	**25**
	%	%	%	%	%	%	%	%	%	%	%	%
Increased blood	97.1	97.5	97	96.7	89.1	92.5	87.2	87.1	89.1	92.5	88.9	84
Healthy mother and child	51.5	52.5	51.5	50	63.6	70	56.4	64.5	46.7	37.5	51.9	56
Prevention against anaemia	53.4	45	63.6	53.3	50	47.5	56.4	45.2	46.7	22.5	59.3	72
Provides energy	47.6	55	45.5	40	23.6	20	33.3	16.1	32.6	27.5	55.6	16
It helps to develop the baby in the womb	12.6	7.5	21.2	10	31.8	35	25.6	35.5	26.1	10	33.3	44
Birth of healthy child	23.3	25	21.2	23.3	22.7	27.5	20.5	19.4	15.2	20	14.8	8
Increase in appetite	11.7	17.5	6.1	10	7.3	7.5	12.8	-	15.2	17.5	14.8	12
It helps pregnant women during labour	4.9	2.5	6.1	6.7	17.3	15	23.1	12.9	6.5	2.5	11.1	8
Prevents dizziness	3.9	-	6.1	6.7	4.5	7.5	5.1	-	6.5	7.5	11.1	-
Reduce mortality rate among mothers	7.8	7.5	6.1	10	1.8	-	2.6	3.2	2.2	-	3.7	4
Prevents stooping caused by heaviness of body	4.9	7.5	3	3.3	1.8	2.5	-	3.2	1.1	-	3.7	-
SAVES US FROM NIGHTBLINDNESS	-	-	-	-	1.8	2.5	2.6	-	1.1	-	3.7	-
COULD NOT RESPOND	-	-	-	-	-	-	-	-	1.1	2.5	-	-

Note: The percentages add up to more than 100 because of multiple responses

9.3.8 Knowledge of providing IFA supplements to Pregnant /Post Partum Women

When asked about the number of days that IFA tablets should be given to pregnant women, about when pregnant women should start taking IFA tablets, and about the number of days that IFA tablets should be given to post-partum women, very large majority of health workers/volunteers came up with same answers. This showed a high level of knowledge among health workers/volunteers regarding this subject. Consistent with the results of previous round, most of the health workers/volunteers mentioned 176-225 days as the required number of days that IFA tablets should be given to pregnant women. Similarly, 91-120 days was the time when most of the health workers/volunteers thought pregnant women should start taking IFA tablets. Most of them also seemed to know that post-partum women should take IFA tablets for 41-50 days. *(Table 74)*

Table 74: Knowledge on When to Give IFA Tablet To Pregnant/Post Partum Women

Round 2	Com A				Com B				Com C			
	All	FCHV	MCHW	VHW	All	FCHV	MCHW	VHW	All	FCHV	MCHW	VHW
Base : All	**103**	**40**	**33**	**30**	**110**	**40**	**39**	**31**	**92**	**40**	**27**	**25**
	%	%	%	%	%	%	%	%	%	%	%	%
No of days to give IFA tablet to pregnant women												
90-175	1.9	-	-	6.7	3.6	2.5	2.6	6.5	6.5	10	3.7	4
176-225	96.1	97.5	100	90	95.5	97.5	97.4	90.3	70.7	42.5	96.3	88
Could not respond	1	2.5	-	-	0.9	-	-	3.2	21.7	45	-	8
Average no. of days	**179.4**	**180**	**180**	**177.9**	**179**	**180**	**179.8**	**176**	**180**	**177.9**	**183.2**	**178.2**
Should start taking IFA tablets by pregnant women												
Could not respond	-	-	-	-	2.7	-	-	9.7	14.1	30	-	4
1-15 days	-	-	-	-	0.9	-	-	3.2	-	-	-	-
31-60 days	1	-	-	3.3	-	-	-	-	-	-	-	-
61-90 days	14.6	12.5	18.2	13.3	21.8	22.5	20.5	22.6	4.3	5	-	8
91-120 days	84.5	87.5	81.8	83.3	74.5	77.5	79.5	64.5	80.4	65	96.3	88
120 days +	-	-	-	-	-	-	-	-	1.1	-	3.7	-
Average no. of days	**91.2**	**91.6**	**90.8**	**91.1**	**90.9**	**93.1**	**91.0**	**87.5**	**95.4**	**99.4**	**94.4**	**92**
Number of days to give IFA tablets to postpartum woman												
21-30	1	2.5	-	-	-	-	-	-	-	-	-	-
31-40	-	-	-	-	0.9	2.5	-	-	-	-	-	-
41-50	98.1	95	100	100	98.2	97.5	100	96.8	87	70	100	100
Could not respond	1	2.5	-	-	0.9	-	-	3.2	13	30	-	-
Average no. of days	**44.7**	**44.4**	**45**	**45**	**44.6**	**44.5**	**44.6**	**44.8**	**44.2**	**44.0**	**44.4**	**44.4**

9.4 IFA Supplementation Program

9.4.1 Participation in IFA Supplementation Program

It was observed that, except for FCHVs in Com C, majority of the health workers/volunteers in all three components had been involved in IFA supplementation program within their community. The study revealed that FCHVs in Com C were not allowed to distribute IFA tablets; thus their limited involvement in the program. Most of the health workers/volunteers had continuously remained involved in the program as well *(Table 75).*

Among those health workers/volunteers who had been continually distributing IFA supplements, some from Components and B and Component C had taken break for short duration in between (Com A:

27%, Com B: 16%, Com C- 12%). However, no health workers/volunteers had taken such break in Com C during previous round.

Table 75: Participation in IFA Supplementation Program

	Com A				Com B				Com C			
	All	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**
Round 1												
Base : All	**120**	**39**	**41**	**40**	**120**	**40**	**40**	**40**	**120**	**40**	**39**	**41**
Involvement in the program (%)	95	100	100	85	90.8	80	100	92.5	84.2	52.5	100	100
Continuation of distributing IFA supplement to till date (%)	84	95	90	67	82	72	93	83	78	48	87	100
Break-up in IFA distribution activity (%)	28	10	41	32	21	2	25	35	0	0	0	0
Round 2												
Base : All	**103**	**40**	**33**	**30**	**110**	**40**	**39**	**31**	**92**	**40**	**27**	**25**
Involvement in the program (%	97.1	92.5	100	100	98.2	97.5	100	96.8	62	27.5	96.3	80
Continuation of distributing IFA supplement to till date (%)	89.3	87.5	97.0	83.3	90.9	95.0	92.3	83.9	58.7	25.0	88.9	80.0
Break-up in IFA distribution activity (%)	27	8	36	43	16	5	23	23	12	0	26	16

9.4.2 Supervision of IFA Supplementation Program

An alarming majority in all three components mentioned that they had not received supervision of any kind (Com A: 93.2%, Com B: 86.4%, Com C: 97.8%). Additionally, among those who did report of having received supervision, most of them perceived it as just simple inquiries.

Table 76: Supervision of IFA Supplementation Program

	Round 1			Round 2		
Supervision made of program or of institution by someone	**Com A**	**Com B**	**Com C**	**Com A**	**Com B**	**Com C**
Base : All	**120**	**120**	**120**	**103**	**110**	**92**
	%	**%**	**%**	**%**	**%**	**%**
Yes	51.7	26.7	10	6.8	13.6	2.2
No	48.3	73.3	90	93.2	86.4	97.8
How was it helpful to program or to institution						
Base : Those supervised	**62**	**32**	**12**	**7**	**15**	**2**
	%	**%**	**%**	**%**	**%**	**%**
Was not helpful	77.4	65.6	83.3			
Simply some inquiry was made	48.4	50	25	57.1	66.7	100
How to maintain register and records	4.8	12.5	16.7	14.3	20	50
It provides suggestion	1.6					
To get additional IFA tablets		6.3		42.9	26.7	-

****Note: The percentages add up to more than 100 because of multiple responses***

9.4.3 Training Program on IFA Supplementation

A large majority of the health workers/volunteers from Component A (94.2%) and Component B (86.4%) reported to have received training on IFA supplementation, whereas only less than half of health workers/volunteers had received training in Com C. Compared to previous round, the proportion of health workers/volunteers who had received training showed marked increase in Com B. However, under same comparison, there was a decline in Com C. *(Table 77)*.

Most of the health workers/volunteers appreciated the value of the training program (Com A: 86%, Com B: 70%, Com C: 27%). This proportion of health workers/volunteers who reported that the training was sufficient/ helpful was higher than in the previous year. Only in Com C did the training programs fail to achieve improved perception.

Table 77: Training Program on IFA Supplementation

	Com A				Com B				Com C			
	All	**FCHV**	**MCHW**	**VHW**	**All**	**FCHV**	**MCHW**	**VHW**	**All**	**FCHV**	**MCHW**	**VHW**
Round 2												
Base : All	**103**	**40**	**33**	**30**	**110**	**40**	**39**	**31**	**92**	**40**	**27**	**25**
Training received %	94.2	95	93.9	93.3	86.4	100	87.2	67.7	40.2	17.5	66.7	48
Training was sufficient/helpful (%)	86	85	88	87	70	85	67	55	27	10	48	32

9.4.4 Information on Register Used by FCHVs

When FCHVs were asked if they currently had a register to fill about IFA tablets, majority from Component A (82.5%) and Component B (85.0%) reported of having the register. However, very few of FCHVs in Com C had the register. In addition, all the registers in use in Com C were the old ones. In Com B, where more FCHVs reported of having the register compared to previous year, new registers were more in use. The survey revealed that FCHVs in Com C did not maintain register as they were not allowed to distribute IFA tablets; with 47.5 % of the FCHVs there saying so.

It was also seen that mostly FCHVs themselves were the ones who maintained the register *(Table 78).* The family members of FCHVs also helped in maintaining the register. It was seen that family members also played an important role in collecting statistics from the register.

To the question on the frequency of statistic collection, a large majority of FCHVs (neglecting those in Com C) reported the time span of 21-30 days; with an average reported time interval of 29 days.

Table 78: Information on Register Used by FCHVs

	Round 1				Round 2			
	All	**COM A**	**COM B**	**COM C**	**All**	**COM A**	**COM B**	**COM C**
Base : All FCHVs	**119**	**39**	**40**	**40**	**120**	**40**	**40**	**40**
Have register (%)	77.3	97.4	75	60	61.7	82.5	85	17.5
Have Old register (%)	46.2	69.3	52.5	17.5	30.0	42.5	30.0	17.5
Have new register (%)	31.1	28.2	22.5	42.5	31.7	40.0	55.0	0
Register maintained by								
Base : All FCHVs	**119**	**39**	**40**	**40**	**120**	**40**	**40**	**40**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Self	68.1	53.8	75	75	45	72.5	52.5	10
Family members	25.2	33.3	30	12.5	21.7	17.5	37.5	10
Village Health Worker	8.4	12.8	2.5	10	10	2.5	12.5	15
MCHWs	3.4	7.7	-	2.5	7.5	7.5	10	5
Don't Know/Can't Say	1.7	-	2.5	2.5	5	5	2.5	7.5
Statistic collected by								
Self	65.5	76.9	57.5	62.5	20	15	32.5	12.5
Village Health Worker	15.1	5.1	22.5	17.5	1.7	2.5	2.5	-
Family members	14.3	17.9	15	10	40	65	40	15
MCHWs	2.5	-	-	7.5	14.2	15	20	7.5
Don't Know/Can't Say	1.7	-	2.5	2.5	14.2	2.5	5	35
Nobody came for distribution	0.8	-	2.5	-				
Frequency of collecting statistic								
None					1.7	-	-	5
1-10 days	2.5	-	7.5	-	0.8	-	2.5	-
11-20 days	4.2	-	5	7.5	1.7	-	2.5	2.5
21-30 days	85.7	100	70	87.5	70.8	100	90	22.5
Don't Know/Can't Say	7.6	-	17.5	5	25	-	5	70
Average days	**28.1**	**28.8**	**26.2**	**29.1**	**29.09**	**29.35**	**29**	**28.4**

Note: The percentages add up to more than 100 because of multiple responses

9.5 Plastic Bottles Used for IFA Tablet Distribution

When FCHVs where asked if they receive enough number of plastic bottles for IFA tablet distribution, most of the FCHVs from Component A (74.4%) reported positively, whereas only 20 percent of the FCHVs from Component B and 22.5 percent from Component C reported of receiving enough plastic bottles for IFA distribution.

Table 79: Plastic Bottles used for IFA Tablet Distribution

	All	COM A	COM B	COM C
Base : All FCHV	**119**	**39**	**40**	**40**
	%	**%**	**%**	**%**
Did you get enough number of plastic bottles				
Yes	38.7	74.4	20	22.5
No	61.3	25.6	80	77.5
Base : Those who got	**46**	**29**	**8**	**9**
	%	**%**	**%**	**%**
Do you like these plastic boxes?				
Yes	95.7	93.1	100	100
No	4.3	6.9	-	-

9.6 Information on Use of Flip Chart by FCHVs

FCHVs were given a flip chart that explained about anemia. The survey revealed that almost half of the FCHVs in all three components reported of not having the flip chart. This was a visible decline compared to previous year. Although almost all of the FCHVs who had the flip chart reported to have used it for the purpose of providing health education and answered that they found the flip chart useful, the large portion of them who did not have the flip chart could not make use of the chart *(Table 80)*.

Table 80: Information on Use of Flip Chat by FCHVs

	Round 1			Round 2		
	Com A	Com B	Com C	Com A	Com B	Com C
Base : All FCHVs	**39**	**40**	**40**	**40**	**40**	**40**
Have flip chart (%)	74.4	75	62.5	50	60	40
Have used to provide health education to others (%)	69.3	72.5	57.5	23.8	36.0	15.0
Found flip chart useful (%)	74.4	72.5	62.5	50.0	60.0	40.0

The respondents who have flip chats were found not utilizing it in Com A and Com C. The reason reported by the health workers in Com A was an not easy accessibly, they feel difficult to carry flip charts along with them. In the same way, the respondents from Com C mentioned that there has been no unity among the women and hence they do not use flip charts.

Table 81: Reason for not using Flip Chart

	COM A	COM B	COM C
Base : Those have flip chart	**20**	**24**	**16**
Mothers groups are in distance and is difficult to carry the chart%	100	-	-
Not having unity among women%	-	-	100

9.7 Ways of IFA Tablet Distribution

Over ninety per cent of MCHWs and VHWs in all three components had distributed IFA tablets to pregnant and post partum women at the time of ANC or PNC visit. FCHVs, on the other hand, mostly distributed IFA tablets while visiting door to door or when pregnant/post partum women visited their houses *(Table 82)*. It was observed that clinics also worked as an important IFA-tablet-distributing place, with health workers/volunteers in Com C using this medium extensively. Other volunteer workers also seemed involved in this task in all three components; although mostly in Com A. Some of the health workers/volunteers in Com A and Com C had distributed IFA tablets during vaccination programs as well.

Table 82: Ways of IFA Tablet Distribution.

	Com A				Com B				Com C			
Round 1	**All**	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**
Base : All	**120**	**39**	**41**	**40**	**120**	**40**	**40**	**40**	**120**	**40**	**39**	**41**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
During ANC or PNC visit	77.5	41	92.7	97.5	65	5	97.5	92.5	81.7	50	100	95.1
Women go and collect from their homes	38.3	74.4	34.1	7.5	30	52.5	20	17.5	6.7	10	7.7	2.4
By door to door visit	30.8	64.1	19.5	10	20	47.5	5	7.5	28.3	42.5	23.1	19.5
Should be distributed in village clinic	11.7	-	24.4	10	31.7	-	57.5	37.5				
Round 2												
Base : All	**103**	**40**	**33**	**30**	**110**	**40**	**39**	**31**	**92**	**40**	**27**	**25**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
During ANC or PNC visit	67	15	100	100	70	27.5	97.4	90.3	76.1	47.5	100	96
By door to door visit	35.9	70	15.2	13.3	31.8	72.5	7.7	9.7	10.9	12.5	11.1	8
Women come to their house to collect tablets	31.1	65	12.1	6.7	28.2	65	10.3	3.2	6.5	12.5	-	4
Through Clinic	6.8	2.5	12.1	6.7	10.9	-	17.9	16.1	38	17.5	37	72
Through volunteer workers	9.7	-	15.2	16.7	2.7	-	5.1	3.2	1.1	-	3.7	-
Vaccination program	2.9	-	6.1	3.3	-	-	-	-	2.2	-	3.7	4

Note: The percentages add up to more than 100 because of multiple responses

9.8 Difficulties in Regular IFA Tablet Distribution

Majority of the FCHVs, MCHWs and VHWs for all three components reported of not facing any major complication during IFA Tablets distribution *(Table 83)*. The case was similar in previous study also. For those few health workers/volunteers who reported of having faced difficulties in regular IFA tablet distribution, the major complaint was that it was difficult to convince villagers on the importance of regularly taking IFA tablets.

Table 83: Difficulties in Regular IFA Tablet Distribution

Difficulties faced		Round 1		Round 2	
		Base :	(%)	**Base**	(%)
Com A	**All**	**114**	21.9	**100**	14
	FCHVs	**39**	20.5	**37**	10.8
	MCHWs	**41**	22	**33**	18.2
	VHWs	**34**	23.5	**30**	13.3
Com B	**All**	**109**	7.3	**108**	10.2
	FCHVs	**32**	12.5	**39**	10.3
	MCHWs	**40**	5	**39**	12.8
	VHWs	**37**	5.4	**30**	6.7
Com C	**All**	**101**	1	**57**	10.5
	FCHVs	**21**	-	**11**	-
	MCHWs	**39**	2.6	**26**	11.5
	VHWs	**41**	-	**20**	15

9.9 Support for IFA Tablets Distribution

The proportion of health workers/volunteers who reported receiving some help for IFA distribution from individuals/organizations was similar in all three components (Com A: 67%, Com B: 68.5%, Com C: 63.2 %). In Com B, this was an increase compared to previous year whereas, in Com A, the proportion was lower than in the other districts surveyed previously.

Mainly, the health workers/ volunteers had been receiving support through health posts and sub-health posts. Compared to previous year, the proportion of health workers/volunteers who had received support through such health posts and sub-health posts was high in Com A and Com B. In contrast, the proportion was lower in Com C when compared with last round. Majority of the health workers/volunteers also reported of having received mutual support from each other. In Com C, teachers, mothers' group, and village clinics also appeared to have provided support to good number of health workers *(Table 85).* Traditional birth attendants, however, did not seem to have provided much of support to the health workers/volunteers.

Table 84: Support received for IFA Tablets Distribution

Support Received (%)		Round 1		Round 2	
		Base	(%)	**Base**	(%)
	All	**114**	82.5	**100**	67
	FCHVs	**39**	74.4	**37**	54.1
	MCHWs	**41**	82.9	**33**	78.8
Com A	**VHWs**	**34**	91.2	**30**	70
	All	**109**	48.6	**108**	68.5
	FCHVs	**32**	28.1	**39**	66.7
	MCHWs	**40**	52.5	**39**	71.8
Com B	**VHWs**	**37**	62.2	**30**	66.7
	All	**101**	62.4	**57**	63.2
	FCHVs	**21**	71.4	**11**	36.4
	MCHWs	**39**	61.5	**26**	61.5
Com C	**VHWs**	**41**	58.5	**20**	80

Table 85: Support for IFA Tablets Distribution

Supported by	**Round 1**			**Round 2**		
	Com A	**Com B**	**Com C**	**Com A**	**Com B**	**Com C**
Base : Those were supported	**94**	**53**	**63**	**67**	**74**	**36**
	%	**%**	**%**	**%**	**%**	**%**
Health Post/Sub Health Post	58.5	32.1	61.9	80.6	66.2	38.9
VHWs	46.8	20.8	36.5	40.3	27	19.4
MCHWs	35.1	39.6	22.2	35.8	40.5	13.9
Family members	13.8	-	4.8	3	1.4	5.6
TBA	2.1	-	1.6	-	-	2.8
Clinic	2.1	-	3.2	-	-	-
Merlin institute	-	3.8	-	-	-	-
Village Clinic	-		-	-	-	8.3
Deprox institute	-	1.9	-	-	-	-
Social worker	-	1.9	-	-	-	-
Community/ village people	-	-	6.7	-	-	-
Assistant health worker	-	-	11.1	-	-	-
Teacher	-	-	4.8	1.5	-	8.3
Adra Nepal	-	-	4.8	-	-	-
Ama Samuha	-	-	-	-	-	5.6

Note: The percentages add up to more than 100 because of multiple responses

9.10 De- Worming

As far as health workers/volunteers' knowledge on time to give de-worming (Albendazole) to pregnant women is concerned, most of them reported that Albendazole should be given to pregnant women

during the end of second month of pregnancy, i.e. between 51-60 days of pregnancy *(Table 86).* In the previous study, health workers/volunteers seemed uncertain between whether to give de-worming in the third or fourth month of pregnancy. However, except in Com C, more number of health workers/volunteers were confident that third month of pregnancy was the right time to give de-worming medicine.

Table 86: Knowledge of De-Worming

	Round 1			Round 2		
	Com A	**Com B**	**Com C**	**Com A**	**Com B**	**Com C**
Base : All	**120**	**120**	**120**	**103**	**110**	**92**
	%	**%**	**%**	**%**	**%**	**%**
Month of pregnancy when de-worming required						
1 Month	-	-	-	21.3	16.3	2.2
2 Months	-	-	0.8	68	62.7	34.8
3 Months	15	45.8	38.3	1.9	1.8	10.9
4 Months	69.2	43.3	45.8	4.9	17.3	39.1
5 Months	4.2	1.7	1.7			
6 Months and more	5.0	9.1	13.3			
Don't Know/Can't Say	6.7	2.5	7.5	3.9	1.8	13

9.11 Night Blindness

9.11.1 Knowledge on Night Blindness

Almost all FCHVs, MCHWs and VHWs from all three components reported that they had heard about night blindness. When they were further asked: *"Can pregnant women suffer from night blindness"*, almost all health workers/volunteers answered in the affirmative. A few of them also reported that they had met pregnant women suffering from night blindness. *(Table 87)* More health workers/volunteers in Com A had encountered women having night blindness than in other components. The case for Com A was similar in previous study also but the health workers/volunteers in Com B reported of having met with fewer women with night blindness than in previous year (32.2% in previous year versus 14.5%). Com C seemed to have the least number of cases for night blindness in women.

Table 87: Information on Night Blindness during Pregnancy

	Com A				Com B				Com C			
	All	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**
Round 1												
Base : All	**120**	**39**	**41**	**40**	**120**	**40**	**40**	**40**	**120**	**40**	**39**	**41**
Awareness of Night Blindness (%)	99.2	97.4	100	100	97.5	95	100	97.5	99.2	97.5	100	100
Possibility in pregnancy (%)	96.7	89.7	100.0	100.0	91.7	82.5	97.5	95.0	97.5	92.5	102.4	97.6
Ever encountered women Having Night Blindness (%)	39.7	33.1	39.0	48.0	32.2	22.8	40.0	35.1	4.0	4.8	2.1	4.9
Round 2												
Base : All	**103**	**40**	**33**	**30**	**110**	**40**	**39**	**31**	**92**	**40**	**27**	**25**
Awareness of Night Blindness (%)	99	97.5	100	100	97.3	95	100	96.8	98.9	97.5	100	100
Possibility in pregnancy (%)	96.2	90.0	100.0	100.0	93.7	87.5	97.4	96.8	97.8	97.5	96.3	100.0
Ever encountered women Having Night Blindness (%)	31.1	25.1	36.4	33.3	14.5	12.5	20.6	9.7	5.4	2.5	11.1	4.0

9.11.2 Suggestion Provided to Pregnant Women Suffering from Night Blindness

During the study it was observed that most of the health workers/volunteers who had met with women suffering from night blindness had suggested them to eat nutritious food, visit health facility, and eat food rich in Vitamin A *(Table 88)*. Suggestion to take Vitamin A capsules was, however, relatively less (Com A: 25%, Com B: 25%, Com C: 40%). Suggestion to eat green vegetables and liver also appeared substantially in Com A.

Table 88: Suggestion Provided to Pregnant Women Suffering from Night Blindness

	Round 1			Round 2		
	Com A	**Com B**	**Com C**	**Com A**	**Com B**	**Com C**
Base : Those encountered Patient	**48**	**39**	**5**	**32**	**16**	**5**
	%	**%**	**%**	**%**	**%**	**%**
Suggestion to Night Blindness						
To visit Health Facility	75	43.6	80	46.9	68.8	80
To take Vitamin A-fortified foods	66.7	79.5	40	43.8	43.8	40
To take Vitamin A capsules	64.6	53.8		25	25	40
To intake nutritious foods	29.2	82.1	40	75.0	68.8	80
To take Eat more yoghurt and milk	27.1	46.2		21.9	37.5	40
To take eat liver meat	16.7	5.1	20	12.5	-	-
To take enough vegetables	-	-	-	28.1	-	-
To take IFA pills	-	-	-	3.1	6.3	-

Note: The percentages add up to more than 100 because of multiple responses

9.12 Vitamin A

9.12.1 Time to take Vitamin A by Post Partum Women

Majority of the health workers/volunteers mentioned that post partum women should take Vitamin A supplementation within 41-50 days after giving birth. However, a more of the health workers/volunteers in Com A and Com B also believed that Vitamin A capsules should be taken within first ten days of giving birth (*Table 89)*. Such a lack of clarity among health workers/volunteers was present both during the baseline study and in the present endline study.

Table 89: Time to Take Vitamin A by Post Partum Women

	Com A				Com B				Com C			
Round 1	**All**	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**	**All**	**FCHVs**	**MCHWs**	**VHWs**
Base : All	**120**	**39**	**41**	**40**	**120**	**40**	**40**	**40**	**120**	**40**	**39**	**41**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
1-10	7.5	7.7	9.8	5	39.2	42.5	40	35	3.3	10	-	-
11-20					0.8	-	-	2.5	2.5	5	-	2.4
21-30	1.7	-	4.9	-	3.3	5	-	5				
41-50	90	92.3	85.4	92.5	55	52.5	60	52.5	94.2	85	100	97.6
Could not respond	0.8	-	-	2.5	1.7	-	-	5				
Round 2												
Base : All	**103**	**40**	**33**	**30**	**110**	**40**	**39**	**31**	**92**	**40**	**27**	**25**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
1-10	38.8	42.5	36.4	36.7	46.4	55	35.9	48.4	4.3	5	7.4	-
11-20	1	-	-	3.3	-	-	-	-	-	-	-	-
21-30	4.9	5	6.1	3.3	-	-	-	-	9.8	15	3.7	8
31-40	-	-	-	-	-	-	-	-	1.1	2.5	-	-
41-50	55.3	52.5	57.6	56.7	50.9	42.5	61.5	48.4	77.2	65	85.2	88
Could not respond	-	-	-	-	2.7	2.5	2.6	3.2	7.6	12.5	3.7	4

9.12.2 Source of Vitamin A Capsule

In both previous and present rounds, sub-health posts appeared as the major source from where pregnant women obtained Vitamin A capsules. FCHVs were another main source of Vitamin A

capsules for post-partum women. Compared to previous year, FCHVs in Com C seemed to have become even more involved in this. MCHWs, on the other hand, do not seem as active in Com C as in other components. Outreach clinics could also be seen to have developed as an important source of Vitamin A capsules in Com B and, especially, Com C. 47.8% of respondents in Com C mentioned outreach clinics as an important source.

Table 90: Place from Where Pregnant Women Obtain Vitamin A Capsule

Round 1	Com A				Com B				Com C			
	All	FCHV	MCHW	VHW	All	FCHV	MCHW	VHW	All	FCHV	MCHW	VHW
Base	**116**	**35**	**41**	**40**	**110**	**33**	**39**	**38**	**117**	**38**	**38**	**41**
	%	%	%	%	%	%	%	%	%	%	%	%
Sub-Health post	75	57.1	87.8	77.5	71.8	57.6	92.3	63.2	81.2	71.1	92.1	80.5
FCHVs	66.4	77.1	65.9	57.5	60	63.6	51.3	65.8	15.4	21.1	13.2	12.2
Health post	42.2	34.3	43.9	47.5	16.4	18.2	10.3	21.1	27.4	36.8	18.4	26.8
Hospital	30.2	28.6	22	40	6.4	9.1	5.1	5.3	14.5	18.4	15.8	9.8
Bought from Pharmacy	18.1	8.6	14.6	30								
MCHWs	15.5	14.3	17.1	15	8.2	-	15.4	7.9	10.3	7.9	15.8	7.3
Out reach clinic	12.9	8.6	14.6	15	20	9.1	25.6	23.7	8.5	5.3	13.2	7.3
VHWs	9.5	5.7	14.6	7.5	7.3	-	-	21.1	6	5.3	2.6	9.8
Round 2	**Com A**				**Com B**				**Com C**			
	All	FCHV	MCHW	VHW	All	FCHV	MCHW	VHW	All	FCHV	MCHW	VHW
Base	**99**	**36**	**33**	**30**	**103**	**35**	**38**	**30**	**90**	**39**	**26**	**25**
	%	%	%	%	%	%	%	%	%	%	%	%
Sub-Health post	84.8	88.9	84.8	80	80.6	77.1	81.6	83.3	73.3	69.2	84.6	68
FCHVs	87.9	75	93.9	96.7	64.1	51.4	71.1	70	64.4	56.4	73.1	68
MCHWs	29.3	11.1	36.4	43.3	27.2	14.3	42.1	23.3	12.2	5.1	34.6	-
Health post	21.2	13.9	18.2	33.3	26.2	37.1	18.4	23.3	28.9	28.2	23.1	36
Out reach clinic	8.1	8.3	6.1	10	28.2	8.6	42.1	33.3	47.8	23.1	61.5	72
VHWs	21.2	2.8	27.3	36.7	13.6	-	18.4	23.3	6.7	2.6	3.8	16
Hospital	9.1	13.9	6.1	6.7	11.7	14.3	10.5	10	6.7	10.3	3.8	4
Private Doctor/Clinic	4	2.8	6.1	3.3	1.9	5.7	-	-	1.1	-	-	4
Bought from Pharmacy	-	-	-	-	1	2.9	-	-	1.1	2.6	-	-
TBA	-	-	-	-	1	-	2.6	-	-	-	-	-

****Note: The percentages add up to more than 100 because of multiple responses***

9.13 Incidence of Breakup in IFA/Vitamin A/De-Worming Tablet distribution

There were a few incidents in all three components when the distribution of IFA/Vitamin-A/De-worming tablets had been interrupted *(Table 91).* Health workers/volunteers attributed this breakup mostly to (1) the lack of stock at health facilities, and (2) absence of supply from District Public Health Office. Such incidence of breakup was very minimal in Com C and, in Com B also, fewer incidence of breakup were reported than in previous year. In comparison, health workers/volunteers in Com A seem to have witnessed the most incidences of breakup in tablets distribution.

Table 91: Incidence of Stopping IFA/Vitamin/De-worming Tablet Distribution

	Round 1			Round 2		
	Com A	Com B	Com C	Com A	Com B	Com C
Base : All	**120**	**120**	**120**	**103**	**110**	**92**
Stoppage of IFA tablets distribution %	18.3	30.8	1.7	28.2	20.9	4.3
Stoppage of Vitamin A capsule distribution %	17.5	20.8	-	13.6	7.3	4.3
Stoppage of De worming tablets distribution % Yes	17.3	13.8	2.5	13.6	6.4	3.3

9.14 Suggestion from Health workers/ Volunteers for Improvement on Iron Distribution program

The health workers were asked to provide their suggestion to further improve the on going iron distribution programs in their community. In response to this question, majority of the health workers/ Volunteers from Com B emphasized more on making community aware about the iron supplements.

However the health workers/ Volunteers from Com A and Com C stressed for the need to mobilize trained FCHVs. Other reportedly mentioned suggestion from them were to make timely supervision, to have a regular meeting with mothers group and inform them about the tablets, regular supply of iron, make provision to give refresher training etc.

Table 94: Suggestion from Health workers/ Volunteers for Improvement on Iron Distribution program

	All	COM A	COM B	COM C
Base : All respondents	**305**	**103**	**110**	**92**
	%	%	%	%
Should create awareness about the iron tablets in the community	76.5	62.2	86.3	80.5
Trained FCHV should be mobilized	58.4	36.9	52.7	89.1
Make timely supervision	39.0	39.8	28.2	51.1
Have a regular meeting of mothers group and informed them about iron tablets	32.1	29.1	40.9	25
Regular supply of iron should be maintained and problem should not be reoccurred	21	9.7	12.7	43.5
Make provision to give a refresher training	20.6	14.6	12.7	36.9
FCHV should be at least a literate woman	20.3	19.4	15.5	27.2
Encourage by paying a token amount of money instead of asking to provide free services	16.8	12.7	14.5	24
Provide some basic amenities such as umbrella, bag and shoes to field worker	13.1	35	2.7	1.1
All husbands should be aware about iron tablets	10.8	7.8	14.5	9.8
Campaigned through radio and TV	10.2	10.7	9.1	10.9
Make an arrangement to distribute iron tablets in plastic boxes	3.3	3.9	2.7	3.3
Others	3.6	4	2.7	5.5

Further the health workers were enquired whether IFA distribution work is creating any problem to complete the given assignment to FCHVs. More than 90% of the health workers / volunteers across all the components stated that IFA distributing activity does not hamper their regular task.

Few more percentage of the FCHVs (7.7%) and MCHWs (7.7%) from Com B felt the activity overloaded as compared to health workers from other components.

Table 95: Overload of IFA distribution activity for FCHVs

	COM A	FCHV	MCHW	VHW	COM B	FCHV	MCHW	VHW	COM C	FCHV	MCHW	VHW
Base : Those involved in activities	**100**	**37**	**33**	**30**	**108**	**39**	**39**	**30**	**57**	**11**	**26**	**20**
Yes (%)	1	2.7	-	-	5.6	7.7	7.7	-	1.8	-	3.8	-
No (%)	99	97.3	100	100	94.4	92.3	92.3	100	98.2	100	96.2	100

CONCLUSION

From the evaluation survey it can be clearly concluded that IFA coverage among pregnant as well as postpartum women has significantly increased in component B as compared to previous round. Similarly, the compliance of IFA supplements among pregnant as well as post partum has significantly increases after launching IMNMP program in component B.

Similarly, Vitamin A coverage has increased substantially in Round 2 for components A (R1 – 69.4%, R2 – 84.2%) and B (R1 – 52.2%, R2 – 69.7%). The coverage of de-worming tablets is less that other two components but again in com B between two rounds of survey there is an increasing coverage trend for de-worming tablets.

Regard to knowledge on taking additional care during pregnancy in component C was highest as compared to component A and component B. However the IMNMP program in Com B had shown an increasing awareness trend in second round of the survey. Simultaneously in Com B, the practice of taking additional care also has improved as compared to previous round. On an average, respondents from component A had taken ANC check-ups for 3.5 times followed by respondents in component B (3.1 times).

Awareness of Vitamin A in Component C (80.8%) was significantly higher as compared to Component A (73.5%) and Component B (64.2%). The overall awareness in Component A and B have increased significantly in Round 2 from that of Round 1.

FCHVs are the most popular source for getting information of IFA supplementation during pregnancy and post partum in component A and component B. The extra involvements of FCHVs are distinctly observed in Component B in this round. According to health workers/ Volunteers, IMNMP work for FCHVs has not created any kind of overload to perform their assigned activities.

On the whole, the evaluation study has proved that IMNMP program has become effective to lead high iron coverage in Component B. The program has helped to extend micronutrients supplement to pregnant women and lactating women including Vitamin A as compared to previous round.