Concurrent Monitoring of Health & Nutrition Village Level services in Odisha

Annual Consolidated Report

Submitted to:

Technical and Management Support Team

For

Department of Women and Child Development,

And

Department of Health and family Welfare

Government of Odisha

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Submitted by:

ORG Centre for Social Research
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List of Acronyms

AHS	Annual Health Survey
ASHA	Accredited Social health Activist
ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
AWW	Anganwadi Worker
AWC	Anganwadi Centre
AWH	Anganwadi Helper
AYUSH	Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy
ARI	Acute Respiratory Infection
BPL	Below Poverty Line
BEE	Block Extension Educator
BCC	Behaviour Change Communication
BCG	Bacilli Calmette Guerin
BP	Blood Pressure
BPO	Block Programme Officer
CDPO	Child Development Program Officer
CES	Current Employment Statistics
CHC	Community Health Center
CMRF	Chief Minister's Relief Fund
DFID	Department for International Development
DK/CS	Don't Know/Cant Say
DLHS	District Level Household Survey
DPT	Diphtheria, Pertussis, Tetanus
DWCD	Department of Women and Child Development
DOH&FW	Department of Health and Family Welfare
DSWO	District Social Welfare Office
GKS	Gaon Kalyan Samiti
GOI	Government of India
Hb	Hemoglobin
ICDS	Integrated Child Development Service
IEC	Information Education and Communication
IFA	Iron Folic Acid
IMR	Infant Mortality Rate
IMNCI	Integrated Management of Neonatal & Childhood Illnesses
IPHS	Indian Public Health Standards
IUD	Intrauterine Device
JMP	Joint Monitoring Progress

JSY	Janani Suraksha Yojna
KBK	Kalahandi Balangir Koraput Region
LHV	Lady Health Visitor
LPG	Liquefied Petroleum Gas
MIS	Management Information System
MMR	Maternal Mortality Ratio
MO	Medical Officer
MPHS	Multi Purpose Health Worker
MPR	Monthly Progress Report
MUAC	Mid Upper Arm Circumference
NFHS	National Family Health Survey
NGO	Non Governmental Organization
NMR	Neo-natal Mortality Rate
NRHM	National Rural Health Mission
NGO	Non Government Organization
OBC	Other Back ward Caste
O & M	Operation & Maintenance
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PCO	Public Call Office
PDA	Personal Digital Assistant
PEM	Protein Energy Malnutrition
PHC	Primary Health Centre
PNC	Post Natal Care
PSU	Primary Sampling Unit
PWS	Piped Water Supply
SHG	Self Help Group
SNP	Supplementary Nutrition
SC	Scheduled Caste
SPSS	Statistical Package for Social Sciences
SRS	Sample Registration System
ST	Scheduled Tribe
THR	Take Home Ration
TMST	Technical Management & Support Team
TT	Tetanus Toxoid
UNICEF	United Nations Children's Fund
VHND	Village Health & Nutrition Day
VHSC	Village Health and Sanitation Committee
WHO	World Health Organization
SD	Standard Deviation

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SUMMARY

SUMMARY OF KEY INDICATORS

Key Indicators	CCM Q1	CCM Q2	CCM Q3	CCM Q4	Consolidated	NFHS 3 Rural	DLHS 3 Rural	CES 2009 Rural
Nutrition								
Percentage of children (0-59months) under-weight (weight for age)	38.1	42.1	39.1	36.8	39.2	42.3		
Average number of feeding received from AWC by a child in last 1 month	19.5	19.5	19.7	21.0	19.9			
Average number of times child weighed by AWW in last 3 months	1.8	1.9	1.8	1.7	1.8			
% breast fed within one hour of birth	62.8	64.8	61.7	63.9	63.3	55	63.7	64
% received exclusive breast feeding for 6 months	62.6	55.2	57.0	50.4	56.6		42.3	46.8
% of mothers of 6–23 months children who initiated complementary food when the child was aged 6 to 8 months	65.9	67.0	71.2	79.0	72.5			
Health								
Percentage of women who delivered at an health institution (Mothers 0 to 36 months)	78.5	75.2	81.5	83.5	79.8	34.6	40.4	74.4
Percentage of children fully immunized by age 1 (among children aged 12 – 23 months)	73.1	73.4	76.7	84.8	74.2	51.6	61.0	60
% U5 with symptoms of ARI in last two weeks for whom treatment sought	75.9	74.9	73.9	83.4	77.3	73.5	66.5	79.4
% U5 with symptoms of fever for whom treatment sought	84.3	80.5	84.9	86.3	86.7	60.4		
% U5 with symptoms of diarrehea for whom treatment sought	85.0	81.3	79.6	67.1	83.5	55.7	60.3	
Children who had diarrhoea during last two weeks received ORS/ ORT or increased milk or fluid	68.5	61.9	62.7	47.7	61.0	46.3	48.0	69.0
% of post natal women who received 3 ANC during their pregnancy Mothers of 0 to 36 months Children)	71.9	76.6	78.8	84.6	77.6	58.0	52.0	75.2
Percentage of post natal women who received PNC within 2 days of birth (excluding hospital PNC) Mothers of 0 to 36 months children	26.0	23.6	27.2	22.3	24.8			
Percentage of pregnant women who took IFA for at least 100 days Mothers of 0 to 36 months children	56.5	57.7	54.3	57.7	56.7	32.5	47.7	45.5
Percentage of adolescent girls who have	26.9	28.6	23.7	22.7	25.3			

Key Indicators	CCM Q1	CCM Q2	CCM Q3	CCM Q4	Consolidated	NFHS 3 Rural	DLHS 3 Rural	CES 2009 Rural
taken weekly supplementation in last 6 months								
Water and sanitation								
Percentage of households using improved source of drinking water	81.9	84.6	82.0	84.3	83.2	77.3	74.8	81.9
Percentage of households with improved sanitation facility	17.7	16.9	16.9	16.8	17.2	9.0	10.5	
% of villages having more than 80 percent of improved functional tube wells in the village	74.4	76.7	81.4	81.3	78.1			
Percentage of GKS undertaken activity to promote health	46.0	35.8	47.4	42.6	42.5			
Percentage of GKS undertaken activity to promote nutrition	27.3	19.9	27.1	19.9	23.4			
Percentage of GKS undertaken activity to promote improved water and sanitation in the last 3 months	70.0	57.4	61.8	56.5	61.6			
Average number of improved water sources (quality tested) in the village	5.3	4.2	5.3	4.5	4.7			
Awareness on Health and Nutrition								
% aware about preventing anemia among children through IFA supplementation	25.9	21.7	23.6	22.0	23.3			
% aware that the anemic women should consume IFA tablets/Syrup	86.2	89.4	87.1	87.9	87.7			
% aware about initiating breast feeding within 1 hour of birth	73.6	65.1	65.4	58.8	67.1			
% aware about feeding colostrums to the child	82.7	81.6	83.8	85.2	83.1			
% aware about the correct age up to which the child should be exclusively breast fed	64.4	67.0	64.4	54.6	63.0			
% aware that complementary food should be initiated within 6-8 months	68.9	70.2	67.8	62.5	67.6			

EXECUTIVE SUMMARY

1.0 Objectives

1. *The broad objective of the concurrent monitoring exercise is to generate regular, high quality objective reports which provide a true picture of health and nutrition services, coverage and outcomes. The specific objectives are as follows:*

   - *To generate high quality, objective data from all 314 blocks of Odisha on health and nutrition service provision, utilization and outcomes to provide district and state estimates key health and nutrition indicators*

   - *To prepare monthly, quarterly and annual monitoring reports which present clear and concise information for department managers at district and state levels to act upon*

   - *To triangulate concurrent monitoring data with routine and survey data to make a 'best assessment' of the health and nutrition status in Odisha*

   - *To guide improvement of the data quality generated by internal MIS of DWCD and DoH&FW*

2.0 Methodology and Sampling Design

1. *Both quantitative and qualitative research techniques have been used to collect the* required data. Concurrent monitoring involves three types of surveys.

   A. *Beneficiary Survey*

   B. Service Provider Survey

   C. Facility Survey

2. *The beneficiary survey involves interviews with head of the household, mothers of 0-6 years children, lactating mothers, pregnant women and adolescent girls. The service provider survey comprised of interviews with ANM, AWW, GKS, LHV, CDPO, MO and DSWO. The facility survey involved observation of AWC, Sub-center, Mamata Diwas, Pustikar Diwas and sector meetings*

3. *The concurrent monitoring study has been carried out in 314 Blocks spread across 30 districts in Odisha . The selection of blocks in each district was made following random sampling procedure.*

4. *In each block a total of 5 sub-centers were selected following systematic random sampling procedure. In each of the selected sub-center 3 AWCs was selected following systematic random sampling method.*

5. *In each AWC 5 households having mothers of 7 to 72 months children, 3 households having lactating women, 3 households having pregnant women and 3 households with adolescent girls were selected.*

6. *The concurrent monitoring study has covered a sample of 41460 households, 15521 mothers of 7 to 72 months children, 8200 lactating women, 8309 pregnant women and 9361 adolescent girls in the first two quarters.*

7. *The sample coverage of the service providers in the two quarters was 4401 AWWs, 1416 ANMs, 2394 GKS, 298 CDPOs and 300 MOs. In addition to this observations were carried out in all the AWCs and Sub-centers selected for the study, 854 Mamata Diwas and 240 Pustikar Diwas.*

8. *The fieldwork for the first quarter was launched in November 25, 2010 and it got completed on March 15, 2011. The field work for second quarter was carried out during March 20 to June 20, 2011.The field work for third quarter was carried out during July 20 to October 5, 2011. The field work for fourth quarter was carried out in October to December 2011.*

3.0 Salient Findings – Part A- Household Survey

3.1 Profile of the households

1. *Only 16 percent of the household heads had completed at least high school level education. Nearly 30 percent of the household heads were illiterates.*

2. *Most of the households covered in the concurrent monitoring study were Hindus. 28 percent of the households covered in the four quarters belonged to scheduled tribes and 19 percent were from the scheduled castes. Around 37 percent of the head of the households belonged to other backward castes.*

3. *The mean household size was 5.6 persons per household. The mean number of earning members in a household was 1.9.*

4. *Forty percent of the head of the households were involved in casual labour (farm/non farm) and another around one third in farming / agricultural practice.*

5. *Fifty seven percent of all households reported to have a BPL card and a ration card was available with nearly one-third of the households.*

6. *In the KBK districts majority of the household were in lower economic strata (62%) while in non KBK districts majority of the households were in the medium (44%) to higher (26%) economic strata*

a. Child Health and Nutrition

1. *Over three-fifth of the children aged 0-23 months in all the three quarters were put to the breast immediately after birth.*

2. *Seventy three percent of the mothers of children 0-23 months did not squeeze out the first milk (colostrums) from the breast before they initiated breastfeeding. The practice of feeding colostrums was reported by relatively higher proportion of mothers covered in Q3 (76%) and Q4 (76%) than those covered in Q1 (67%) and Q2 (73%).*

3. *Nearly three-fifth of the children in the age group of 0-23 months were exclusively breastfed for 6 months. The percentage of mothers reporting exclusive breast feeding up to 6 months of age was higher in the Q1 (63%) than the Q2 (55%) , Q3 (57%) and Q4 (50%) .*

4. *Among the children in the age group of 6-23 months 73 percent were introduced complementary food between the recommended ages of 6-8 months. The corresponding percentage was higher at 79 percent in Q4.*

5. *Only 53 percent of children reported receipt of supplementary food from AWC for at least 21 days. The average number of days for which SNP was received by the children was 19.9 days.*

6. *Seventy four percent of the children aged 12-23 months were fully immunized. The corresponding percentage was higher in Q4 (85%%) than Q1 (72%) , Q2 (72%)and Q3 (77%)*

7. *Thirty nine percent children covered in the four quarters of the concurrent monitoring study were found to be underweight (-2SD) while 13 percent were severely underweight (-3SD).*

8. *The average number of times the child weighted at the AWC worked out to 1.8.*

9. *Twenty five percent of the children in the age group of 0-59 months had fallen ill during the reference period of last two weeks.*

10. *Around 3 per cent of children in the age group of 0-59 months had suffered from diarrhea. Over all 14 percent of the children had suffered from fever and 18 percent reportedly suffered from ARI/Runny nose/Cough/Breathlessness in the past weeks.*

11. *Over four-fifth of children suffering from diarrhea as well as fever and around three-fourth of those suffering from ARI/Runny nose/Cough/Breathlessness had received treatment.*

12. *Sixty one percent of children age 0-59 months who suffered from diarrhoea during the two weeks preceding the survey were treated with a solution made from ORS packets.*

b. Maternal Health Services

1. *Seventy eight percent of the mothers of 0-36 months children had received at least three ANC check up. 84 percent mothers of 0-36 months children received and 57 percent consumed at least 100 IFA tablets/3 bottles of syrup respectively.*

2. *Almost all mothers of 0-36 months children (97 %) had received at least 2 doses of TT during their last pregnancy*

3. *Nearly four-fifth of the mothers of 0-36 month's children had delivered the last child at any health facility. Overall, 74 percent of the deliveries were conducted at Government health facility and only 5 percent were conducted at private health facilities.*

4. *Around three-fourth of the mothers of 0-36 months children who had delivered the child at home did not receive any postnatal check-up within the critical first two days after delivery.*

5. *Most of the women covered in the survey were aware that hand washing with soap and water is useful to make the surfaces of the hands hygienically clean. Over two third of the women were having the knowledge that unclean / insanitary water can create health problem and unclean / insanitary sanitary conditions at home or outside can create health problem.*

6. *Twenty five percent of the adolescent girls reported consumption of IFA tablets at least once in a week.*

3.4 Water and Sanitation

1. *Eighty three percent of the households reported using improved or potable water sources. The water source which is reportedly most widely used is the public hand pump.*

2. *Seventeen percent of the households reported use of improved toilet facilities. Most of these households (16 percent) used individual toilets - either flush toilets or pit latrines – both considered safe under the JMP definition.*

3. *Ninety eight percent villages had both piped water supply and public hand pumps*

4. *Seventy eight percent of the villages reported that more than 80 percent of their public hand pumps / tube wells were functional, and another 14 percent had between 60 - 80 percent functional hand pumps / tube wells.*

5. *The Gaon Kalyan Samiti in majority of the sample villages (62 percent) were involved in water supply and sanitation. Forty three percent of the GKS undertook health related activities and 23 percent were engaged in nutrition related activities.*

3.5 Awareness

1. *Over two-fifth of the women reported that a child suffering from diarrhea should be administered ORS and 27 percent specifically mentioned that barest feeding should be continued for the child suffering from diarrhea.*

2. *Over two-third of the respondents covered in both the quarters did not have any knowledge about the age at which the first dose of Vitamin A should be given to the child.*

3. *Twenty nine percent of the women were aware that consumption of green leafy vegetables would prevent anemia among children and one-fourth knew that regular consumption of small IFA tablets/iron syrup prevents anemia among young children.*

4. *The most common danger signs during pregnancy as mentioned by the women were swelling of feet (29%), anemia (28 percent), puffiness of face (18 percent) and bleeding (10 percent).*

5. *Over one-fifth of the women carried the wrong perception that a women during pregnancy should consume less than the normal food.*

6. *A large majority of the women (92 percent) covered in all the four quarters agreed that the weight gain of the women should be monitored during pregnancy*

7. *Majority of the women (88 percent) had the knowledge that the anemic pregnant women should consume IFA tablets/syrup everyday.*

8. *Nearly two-third of the women knew that the new born baby should be put to breast within one hour of birth. Over four-fifth of the women covered in both the quarters were aware that the first milk containing colostrums should be fed to the baby*

9. *Over three-fifth of the women in all the three quarters had knowledge about exclusive breastfeeding of the child till 6 months of age. Majority of the women (68%) covered in all the three quarters knew that the child should be given complementary food between 6-8 months*

4.0 Service Provider and Facility Survey

4.1 Functioning of AWC

1. *During the observation in all the three quarters majority of the AWWs were found to be staying in the AWC village. However, the basic infrastructure for AWCs was lacking which adversely affecting the functioning of the AWC. Only 40 per cent of the AWCs were operating from their own building, while others were functioning from School buildings, Community/Panchayat buildings and temples. It is to be noted that around 4 per cent of the AWC were functioning from open space / verandah. In case of around 10 percent of the AWCs, the buildings were in bad condition. A basic amenity like toilets was not available in over three-fourths of the AWCs while 90 per cent did not have electricity.*

2. *Equipment like Salter scale and MUAC tapes are very important for growth monitoring of children but in more than one-fifths of the AWCs it was not available and in some cases the available salter scales were found to be defunct. Another aspect of concern was of lack of storage space for SNP and irregularity of supply of food.*

3. *Mamta Divas, an activity as important as Mamta Divas was being held regularly in nearly 96 percent of the AWWs. As regards the community satisfaction, over 70 percent of the Lactating mother, Pregnant Women, and Mothers of 6 to 59 months, each expressed satisfaction over various services that they received from the AWC.*

4.1 Functioning of Sub-Centres

1. *In nearly half of the Sub-Centres the ANMs were staying outside the villages and a good proportion of them satyed more than 5 km away from the sub-centre.*

2. *Only 49 per cent of the Sub-Centres had their own designated buildings and rest were working from other than designated government buildings. More than three-fifth of the buildings were in good condition and also maintained clean environs. However, when it came to basic facilities like availability of water and toilets half of the sub-Centres had irregular or no water supply; and 73 percent of the Sub-centres did not have toilets.*

3. *Fifty eight of the sub-centres did not have electricity supply. However, most of the Sub-Centres either had mobile connection or had land lines.*

4. *With regard to facilities like a Labour room, only 19 per cent of the Sub Centres had this facility and of these only in 19 per cent deliveries were conducted in last three months. Not all of these Sub-Centres which conducted deliveries were equipped with essential equipment, emergency drug tray and material for conducting deliveries.*

5. *With regard to the availability of all the recommended drugs for Kit A, except for Trimethoprim & Sulphamethoxazole tablets, GV crystals and Zinc Sulphate, all other drugs were available in more than three-fifths of the Sub-Centres. Similarly, with regard to drugs for Kit B, a significant proportion of Sub-Centres had no stocks of Methylegrometrium tab, Methylegrometrium injection, Albendazole tab, Dicyclomine tab, Povidone Iodine Ointment, Chloramphenicole eye ointment.*

4.3 Functioning of GKS

1. *GKS have been formed in 86 percent of villages. Although GKS have been formed in a large number of villages their visibility among lactating mothers, pregnant women and mothers of children 6 to 59 months was found to be very low.*

2. *A high proportion of the women reported that they did not receive any support from the GKS. However, among the service providers, visibility of GKS was good. Majority of the GKS reported to have undertaken activities in water and sanitation followed by Nutrition and Health.*

3. *Major portion of the untied fund available with the GKS was spent in cleaning water sources or supporting treatment of poor and needy.*

4.4Observation of Mamata Diwas

1. *During the Q2 Mamata Diwas was observed to have been organized in 86 percent AWCs regularly and as per the stipulated date. As mandated, in majority of the Mamata Diwas, the ANMs and AWWs were present. However, presence of ICDS supervisors was not found in many AWCs during Mamata Diwas.*

2. *Functional equipment for growth monitoring of children was found in most of the AWCs observing Mamata Divas. However, equipment for hemoglobin count was found in very few AWCs. Other instruments such as for BP measurement were also lacking in some of the sites.*

3. *Awareness of the Mamata Diwas has shown improvement in the intervening period among different categories of beneficiaries.*

4.5Observation of Pustikar Diwas

1. *In around 30 per cent of the blocks Pustikar Diwas was not observed on the stipulated date. Paucity of funds had been one of the major reasons for not organizing Pustikar Diwas in some of the Blocks.*

2. *Wherever Pustikar Diwas was observed, it recorded presence of front line functionaries like the AWW, ICDS Supervisors and LHV. However, presence of senior officials of ICDS like CDPO was found in less numbers.*

3. *It was observed that in most of the events the protocol was followed and various formats and referral slips were filled properly. However, logistics support like sitting arrangements, toilets and drinking water was a problem.*

4. *Awareness on Pustikar Diwas was found to be very low among the women. Most of the children who attended Pustikar Diwas were given medicine and sent back and only a few were referred to higher centers. Of those who attended Pustikar Diwas, majority of them confirmed to have seen an improvement in their child's health. On the whole it was observed that the biggest motivating factor for attending Pustikar Diwas for the beneficiaries was monetary assistance.*

4.6Observation of Joint Sector Meeting

1. *Joint sector meeting are not being conducted as per the stipulated dates. In most of the occasion the meeting is conducted in isolation – making it an ICDS sector meeting or a health sector meeting.*

2. *Whenever there is joint sector meeting in many occasions the meeting is limited to sharing of the MPR and not getting into a discussion mode of verbal autopsy or root cause analyses of morbidity or mortality.*

CHAPTER I: INTRODUCTION

1.1 BACKGROUND

The DoH&FW and DWCD are responsible for delivering health and nutrition services through a vast net work of nearly 7000 sub-centres and 71134 Anganwadi Centres ((Main 60918 and Mini 10216)). There are also a number of special outreach days and activities carried out through village Health and Sanitation committees (known in Odisha as Gaon Kalyan Samitis (GKS).

1.2 OBJECTIVE OF CONCURRENT MONITORING

The broad objective of the concurrent monitoring exercise is to generate regular, high quality objective reports which provide a true picture of health and nutrition services, coverage and outcomes.

The specific objectives are as follows:

- To generate high quality, objective data from all 314 blocks of Odisha on health and nutrition service provision, utilization and outcomes to provide district and state estimates key health and nutrition indicators (see list of indicators in Table-1.1)
- To prepare monthly, quarterly and annual monitoring reports which present clear and concise information for department managers at district and state levels to act upon
- To triangulate concurrent monitoring data with routine and survey data to make a 'best assessment' of the health and nutrition status in Odisha
- To guide improvement of the data quality generated by internal MIS of DWCD and DoH&FW

1.3 KEY INDICATORS UNDER CONCURRENT MONITORING

Table 1.1: List of indicators

Issues	Indicators
Nutrition	1. Percentage of children (0-59months) under-weight (weight for age) 2. Average number of feeding received from AWC by a child in last 1 week 3. Average number of times child weighed by AWW in last 3 months 4. Breast feeding practice • % breast fed within one hour of birth • % received exclusive breast feeding for 6 months • % IYCF practices in children (6 – 23 months)
Health	2. Percentage of Institutional deliveries 3. Percentage of children fully immunized by age 1 (among

Table 1.1: List of indicators	
Issues	**Indicators**
	children aged 12 – 23 months) 4. ARI and fever • % U5 with symptoms of ARI in last two weeks for whom treatment sought • % U5 with symptoms of fever for whom treatment sought 4. ANC - PNC • % of post natal women who received 3 ANC during their pregnancy • Percentage of post natal women who received PNC within 2 days of birth (excluding hospital PNC) 5. Anemia • Percentage of pregnant women who took IFA for at least 90 days • Percentage of adolescent girls who have taken weekly supplementation in last 6 months
Water and Sanitation	1. Percentage of households using improved source of drinking water 2. Percentage of households with improved sanitation facility 3. Percentage of GKS engaged in testing quality of water 4. Children who had diarrhoea during last two weeks received any ORT or increased milk or fluid 5. Percentage of GKS undertaken any specific activity to promote a) health b) nutrition c) improved water and sanitation in the last 3 months 6. Improved percentage of functional tube wells in the village 7. Average number of improved water sources (quality tested) in the village
Awareness	Level of awareness of women age 15 to 49 years about a. health and hygiene practice b. pregnancy and delivery care c. child feeding & care practice (HH)
Maternal deaths	Annual benchmarking for under 5 and maternal mortality – MMR
Anganwadi workers and Anganwadi centres	Presence of AWW, condition of AWC, distance of AWW residing from AWC
ANM and sub-centre	ANM and sub-centre – presence of ANM, condition of SC, distance of ANM residence from SC
GKS – (Gaon Kalyan Samity)	GKS – formed or not, membership known by villagers, any activities undertaken, united fund utilization

Table 1.1: List of indicators	
Issues	**Indicators**
Mamata Divas	Mamata Divas – participation of providers and beneficiaries, numbers attended and activities observed
Pustikar Divas	Pustikar divas – participation of providers and beneficiaries – numbers attended and activities observed
Sector Meeting	Sector Meeting – Attendance of ICDS and health personnel, evidence of convergence, visit to ICDS project office and block PHC.

1.4 METHODOLOGY

Both empirical data and secondary data have been collected from relevant sources. Emphasis has been given to measure the outcome indicators pertinent to the study.

Both quantitative and qualitative research techniques have been used to collect the required data. The research techniques adopted to obtain the required data included structured interviews, In-depth interviews and observations. Concurrent monitoring involves three types of surveys.

A. Beneficiary Survey

B. Service Provider Survey

C. Facility Survey

The specific tasks carried out under each task and the target respondents is given below

1.5 SURVEY QUESTIONNAIRES

A number of structured interview schedules, in-depth discussion guidelines and check lists were developed through a series of consultations with the TMST. The pre-testing exercise was carried out for three days by a team of 6 research and field personnel .During this exercise a total of 100 questionnaires from different categories were pre-tested . Based on the experience of the pre-testing exercise the questionnaires were modified and finalized in consultation with TMST. The research instruments used in the study is given below.

A. Beneficiary Surveys

1. Household questionnaire
2. Questionnaire for mothers and care givers of children 6 months to 6 years
3. Questionnaire for lactating mother
4. Questionnaire for pregnant women
5. Questionnaire for adolescent girls

B. Service Provider Surveys

1. ASHA Questionnaire
2. ANM Questionnaire
3. Questionnaire for GKS member
4. Supervisor / LHV Questionnaire
5. CDPO Questionnaire
6. MO questionnaire

7. Questionnaire for DSWO and other District Officials

C. Facility Surveys

1. Observation Checklist for AWC
2. Observation Checklist for Sub Centers (SC),
3. Observation Checklist for Mamata Diwas
4. Observation Checklist for Pustikar Diwas
5. Village level checklist

1.6 SAMPLING DESIGN

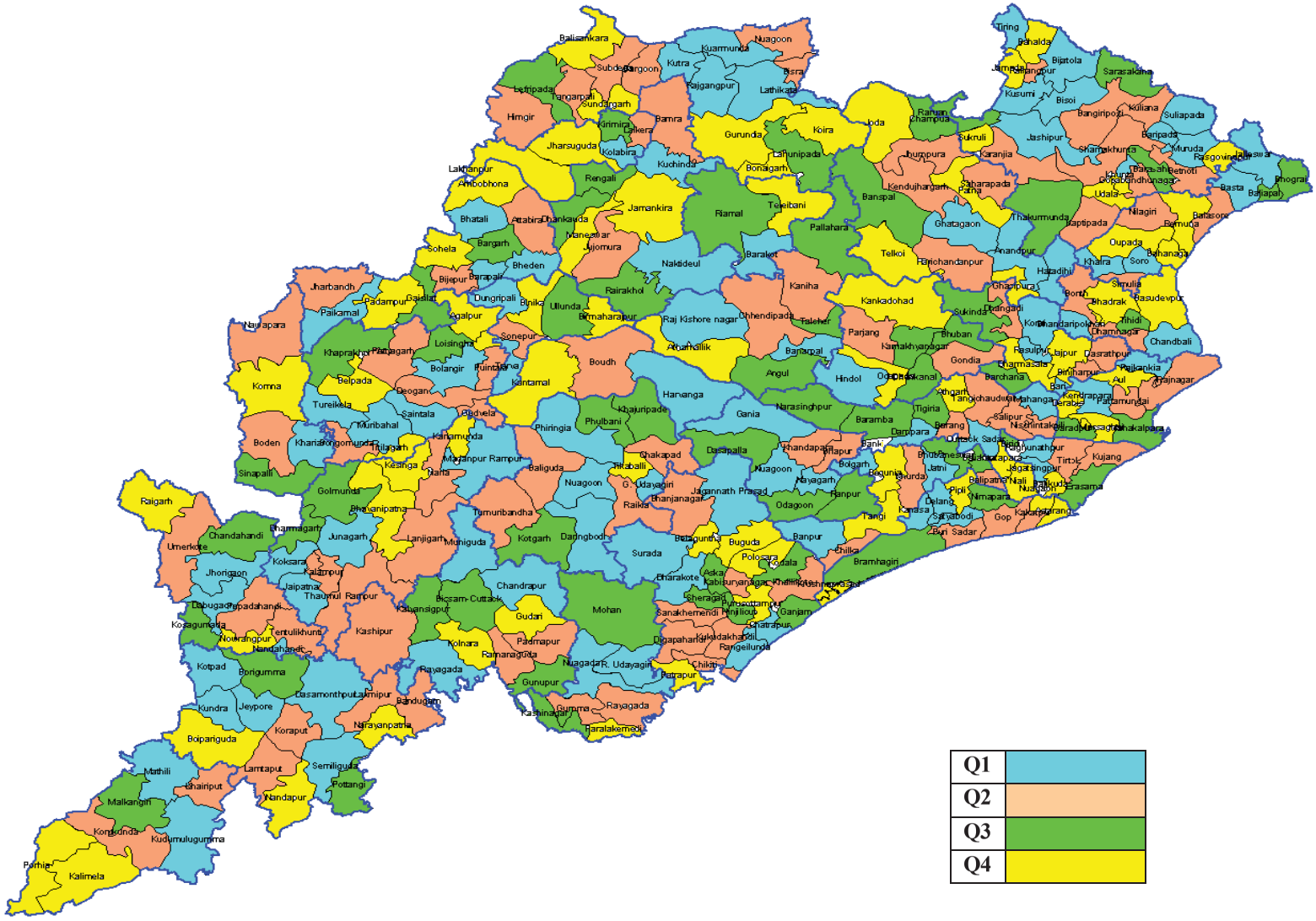
1.6.1 Sampling design for the beneficiary survey

A multistage sampling design was adopted in the concurrent monitoring study. The Blocks were selected as first stage units followed by Sub centers, AWCs and Households.

Selection of blocks

The concurrent monitoring study is being carried out in 314 Blocks spread across 30 districts in Odisha. It was proposed to cover one block from each district every month. A total of 245 blocks were covered in the first three quarters. In the third quarter a total of 69 blocks have been covered. Thus all the 314 blocks in the state have been covered in the concurrent monitoring study. The selection of blocks in each district was made following random sampling procedure. The blocks covered in the previous months were eliminated prior to selection of the blocks for the month in which concurrent monitoring exercise was to be taken up. The coverage of the blocks in the first , second and third quarters has been given in the following map.

Map 1: Coverage of Blocks in Q1, Q2, Q3 and Q4



Selection of Sub-centers

In each block a total of 5 sub-centers were selected following systematic random sampling procedure. A total of 1416 sub-centers have been covered in all the four quarters.

Selection of AWCs

In each of the selected sub-center the ANM was contacted and a list of all existing AWCs in her work jurisdiction was prepared. Using this list, 3 AWCs in each sub-center was selected following systematic random sampling method. Out of the three AWCs selected, in 2 AWCs both household and provider survey was carried out and in the 3rd AWC only provider survey was conducted. The 3rd AWC was selected by lottery method. So 15 AWCs were sampled in each Block out of which 10 AWCs were covered for both household and provider survey while only provider survey was conducted in other 5 selected AWCs. In the four quarters a total of 4401 AWCs have been covered.

Selection of Households and Target Respondents

In each AWC 5 households having mothers of 7 to 72 months children, 3 households having lactating women, 3 households having pregnant women and 3 households with adolescent girls were selected. In each AWC the selection of households having any of the target respondents from the above categories was made following modified cluster sampling methods. In a selected AWC the catchment area of the AWC was mapped and divided in to clusters of 50 households each. These clustered were numbered and two of these were randomly selected.

The interval was calculated by dividing the estimated number of households by the number of household to be selected. The first household in the cluster was selected by generating a random number using currency note method. The selected household was visited for interviews. The next household was selected by adding the interval to the random number. Similarly the rest of the household were selected within a cluster. In case in the selected household a particular respondent was not available then the immediate household was visited following right hand rule. If in this household the respondent was found the interview was conducted else the next immediate household was visited.

In the selected household with more than one type of respondent, selection of the respondent was prioritized. The first choice was lactating mother followed by pregnant mother, mothers with 7 to 72 months children and adolescent girls. Since it was not possible to cover 3 pregnant women and 3 lactating women from the selected clusters we had to cover the available pregnant women and lactating women from the remaining clusters.

A total of 41460 households were covered in the four quarters of concurrent monitoring study. In one household one respondent was contacted apart from the head of the household. While the required sample of mothers of 7 to 72 months children and adolescent girls was almost achieved , the achievement of lactating women and pregnant women fell short of the requirement due to the non availability of required number of respondents in some of the selected AWCs. The details of the sample coverage in the household survey for the first two quarters are given in the following Table.

Table 1.2: Sample Coverage in Household Survey								
Respondents	**Number per AWC**	**Number per block**	**Target sample per quarter**	**Achieved sample**				
				Q1	**Q2**	**Q3**	**Q4**	**Total**
Mothers of 7 to 72 months children	5	50	4500	4419	4484	3234	3384	15521
Mothers of 0-6 months children/Lactating women	3	30	2700	2365	2329	1673	1833	8200
Pregnant women	3	30	2700	2355	2400	1717	1837	8309
Adolescent girls	3	30	2700	2668	2698	1947	2048	9361

1.6.2 Sampling design for the provider and facility observations

The sample size and the criteria for the selection of the service providers and the facility survey is presented in the following table

Table 1.3 Sample Coverage in Provider and Facility Surveys								
Particulars	**Criteria**	**Number per block**	**Target sample per quarter**	**Achieved sample**				
				Q1	**Q2**	**Q3**	**Q4**	**Total**
Provider survey								
AWW	AWW of the selected AWC	15	1350	1232	1293	897	979	4401
ANM	ANM of the selected Sub-center	5	450	400	411	286	319	1416
GKS	Two per Sub-center	10	900	681	687	458	568	2394
CDPO	CDPO of the block covered	1	90	82	88	62	65	298
MO	MO of the block PHC	1	90	87	90	62	61	300
Facility survey								
Observation of AWC	At the selected AWC	15	1350	1232	1293	897	979	440
Observation of Sub center	At the selected Sub-center	5	450	400	411	286	319	1416
Observation of Magmata Divas	5 per AWCs in each block	5	450	122	298	189	245	854
Observation of Pustikar Diwas	One in the selected block	1	90	78	79	40	43	240

1.7 RECRUITMENT, TRAINING AND FIELDWORK

While selecting the field staff, it was ensured that skilled male and female candidates with prior experience of social research are recruited. The candidates having at least a bachelor degree in any of the social science subject were recruited as supervisors and investigators. Further, candidates having previous experience of conducting studies on health and nutrition were given preference. Keeping in mind the dropout rate, 20 percent extra candidates were recruited and trained. A total of 15 supervisors, 15 deputy supervisors, 30 female investigators and 15 district coordinators were deployed to complete the field work

All the investigators, supervisors and district coordinators recruited for the survey were given four days intensive training by the research professionals involved in the concurrent monitoring study. The representatives from TMST and DFID also participated in the training programme. The training of investigators and supervisors comprised of both class room as well as field practice.

The classroom training sessions consisted of instructions in quantitative as well as qualitative data collection, field procedures and a detailed discussion of each item in the interview schedule. The investigators and supervisors were also trained on use of the PDA. Mock calls were also conducted in the classroom before taking them to field for trail calls.

Trial calls in PDA by supervisors and investigators were made in order to maintain a clear understanding of each item in the interview schedule. Only those trainees performing satisfactorily in the training programme were selected for the survey.

The fieldwork for the first quarter was launched in November 25, 2010 and it got completed on March 15, 2011. The field work for second quarter was carried out during March 20, 2011 to June 20, 2011. The field work for the third quarter was carried out during July 01 to October 05, 2011 . The field work for the fourth quarter has been carried out during October 10 to December 10, 2011. A total of 15 field teams were deployed across the state to complete field work in 30 blocks in a month. The usual team composition for carrying out the fieldwork was one coordinator, two male supervisors and two female investigators. The field work for the household survey was taken up by the female investigators. The interviews among the village level service providers and observation of the AWCs, Sub-centers and Mamata Diwas was undertaken by the male supervisors. The interviews among the block level officials, observation of Pustikar Diwas and observation of sector meetings was undertaken by the coordinators. While the interviews among the beneficiaries and village level service providers was taken up using PDA , the interviews among the block level officials was carried out using pen and paper. The field work was monitored by a field controller with the support of two field executives. The Field Executives were responsible for arranging the logistics, field planning, and quality of data and smooth functioning of the field operations in their respective districts / blocks. The field controller and field executives were responsible for supervision and monitoring of field work and solving field problems faced by the field team. The core research team members and senior field professional made a number of field visits across different districts for ensuring high quality of survey data.

1.8 QUALITY CONTROL MECHANISMS

'Quality control' was a continuous process at all stages of the study. The following quality control measures were taken for the study.

- Back check by supervisor: The supervisors involved in the study carried out back check of the interviews carried out by the investigators in around 20 percent of the cases. The Supervisor during the back checks looked into the completeness of the interviews, logical checks and interrelations between responses on various questions. The interviewers were sent back to the respondent for clarification, if required. Supervisor also briefed the team on the problems found on a daily basis.
- Regular Monitoring: The field controller and field executives monitored the performance of the supervisors. The Field Executives visited the survey sites to observe quality of data being gathered and efficacy of the supervisors. They also checked about 5% of the completed PSUs for each field team randomly. The field executives were responsible for sending regular reports to the project coordinator on the progress of the fieldwork, problems faced and to seek clarifications, if any. Field executives also organized debriefing and feed back sessions, whenever required.
- Involvement of researchers: The researchers were also be involved during the fieldwork and interacted with investigators, supervisors and the field executives to have a detailed account of how the quality is being monitored. A feedback session was also conducted by the researcher with all the field teams to gather insights on the actual field situation and sharing of experiences/ problems and arriving at solutions.

1.9 DATA MANAGEMENT

Personal Digital Assistants (PDA) devices were used to collect the empirical data. This ensured the data quality, speed and utilized the field resources most effectively. The data collection was done using PDAs with CSPro software. This did not require any post survey coding and data was transferred from PDAs to server within shortest possible time. The data entry module was made robust by using in-built checks and validations. This was ensured by building suitable range checks and consistency/ logic checks.Data analysis was carried out using the latest version of SPSS and WHO Anthro package. The latter software was used for the weight for age analysis.

1.10 REPORT STRUCTURE

The present report has been presented in two parts – Part A and Part B. The part A of the report deals with the beneficiary survey and covers indicators relating to socio-economic profile of the surveyed households, child health and nutrition, maternal health services, water and sanitation and awareness of women on health and nutrition issues. The Part B of the report presents the findings of the provider survey and the facility survey. The issues relating to AWCs, Sub-centers, GKS, Mamata Diwas, Pustikar Diwas and sector meetings have been covered in Part B of the report.

CHAPTER II: SOCIO DEMOGRAPHIC CHARACTERISTICS

Some of the key household characteristics were collected from the households having any of the target respondent covered in the concurrent monitoring study. The information was elicited through contacts with the head of the households. The household information included basic socio-economic profile of the households as well as the access of the households to various facilities and amenities. The analysis of data presented in this chapter is based on the covered sample of 32336 households spread across the 245 blocks covered in the three quarters.

2.1 SEX OF THE HEAD OF THE HOUSEHOLD

As expected most of the households (95 percent) covered in all the four quarters were headed by males. Around 5 percent of the household heads were females (Table 2.1).

Table 2.1: Sex of the head of the household

Percent distribution of the head of the households by gender

Gender	Q1	Q2	Q3	Q4	Consolidated
Male	95.1	95.6	95.8	95.3	95.4
Female	4.9	4.4	4.2	4.7	4.6
Total N	**11826**	**11924**	**8586**	**9124**	**41460**

2.2 EDUCATIONAL ATTAINMENT

Education is one of the most important socioeconomic factor that is known to significantly influence individual behavior and attitudes towards health and nutrition services. In this context the educational attainment of the head of the households was ascertained in the concurrent monitoring study. The percent distribution of the heads of household by educational status is shown in Table 2.2. In line with the fact that Odisha is not an educationally advanced state, the survey corroborated that only 16 percent of the household heads covered in the four quarters had completed at least high school level education. The corresponding percentage varied between 15-17 percent in different quarters. Twenty nine percent of the household heads covered in all the four quarters were illiterates. As per the census 2011 census provisional figures around 29 percent of the population in the rural areas of the state are illiterates.

Table 2.2: Educational status of the head of the households

Percent distribution of the head of the households by educational status

Education status	Q1	Q2	Q3	Q4	Consolidated	Census 2011 Odisha (Rural)
Illiterate	29.7	30.2	28.8	25	28.6	29.2
Literate without formal schooling	7.9	8.4	8.6	7.2	8	
Less than primary	10.4	11.2	11.3	12.2	11.2	
Primary School complete	14.2	15.9	15.6	17.1	15.6	
Middle School Complete	20.9	19.8	20.6	22.9	21	
High school complete	9.7	7.9	7.7	7.8	8.3	
Higher Secondary (+2) complete	3.7	3.6	3.8	4	3.8	

Table 2.2: Educational status of the head of the households						
Percent distribution of the head of the households by educational status						
Graduate and above	3.4	2.9	3.5	3.6	3.3	
Diploma & Certificate courses	0.2	0.1	0.2	0.2	0.2	
Total N	**11826**	**11924**	**8586**	**9124**	**41460**	

2.3 RELIGION AND CASTE OF THE HEAD OF THE HOUSEHOLD

The distribution of households by religion (as determined by the religion of the household head) is similar to the national trend in most states with a significant majority belonging to the Hindu religion (96 percent). The findings are more or less similar in all the four quarters. The NFHS 3 shows that around 94 percent of the total households in Odisha are Hindus. Christians account for around 3 percent of the sampled households, while Muslim households constitute around 1 percent (Table 2.3).

Table 2.3: Religion of the head of the household					
Percent distribution of the head of the households by religion					
Religion	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
Hindu	93.7	95.8	97.2	98.2	96
Muslim	1.4	1.5	0.4	0.8	1.1
Christian	4.8	2.7	2.4	1.0	2.9
Total N	**11826**	**11924**	**8586**	**9124**	**41460**

The caste/tribe structure of the head of the households presented in Figure 2.1 shows that 28 percent of the households covered in the four quarters belonged to scheduled tribes and 19 percent were from the scheduled castes. Around 37 percent of the head of the households belonged to other backward castes. The NFHS III also shows that majority of the households in Odisha belong to different backward castes (ST 23%, SC 20% and OBC 27%). It may be noted that a relatively higher proportion of scheduled tribes (Q1 27%, Q2 31%, Q3 28% and Q4 28%) were covered in the second quarter

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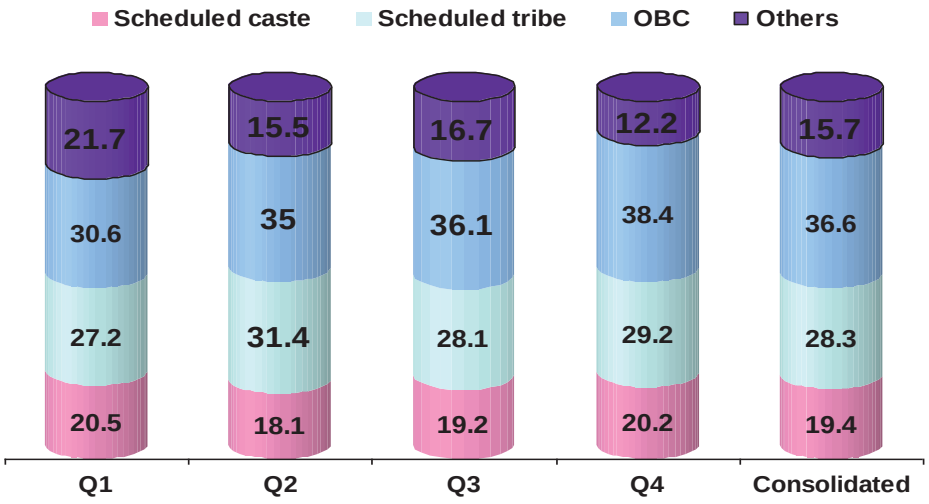
Figure 2.1: Percentage distribution of households by caste/tribe



2.4 HOUSEHOLD SIZE

Table 2.4 shows the distribution of the surveyed households by the number of usual members of the households. The mean household size is 5.6 persons per household. As can be seen, the trend tends towards a higher family size with nearly three fifth of households having 4 to 6 members. Twenty six percent have 7 or more regular residents. Only 13 percent have a household size ranging from 1 to 3 members indicating a low proportion of nuclear households. The above findings are almost similar in the four quarters.

Table 2.4: Number of family members in the household

Percent distribution of households by number of family members

No. of Family Members	Q1	Q2	Q3	Q4	Consolidated
1 – 3	14.3	13.6	12.3	12.1	13.2
4 – 6	59.5	61.5	60.7	59.3	60.3
7+	26.2	24.9	27.0	28.5	26.5
Total N	**11826**	**11924**	**8586**	**9124**	**41460**
Mean number of household members	**5.6**	**5.6**	**5.7**	**5.8**	**5.6**

Table 2.5 shows the proportion of earning members in the household. The mean number of earning members in a household is 1.9. Forty one percent of all households have only one earning member and 38 percent of the households have two earning members. One-fifth of the households have three or more earning members. The inverse relation of a large family size and low number of earning members reflects a high proportion of dependents. The proportion of the households having only one earning member was higher in the first quarter (47%) compared to the last three quarters (35% to 395%).

Table 2.5: Number of earning members in the family					
Percent distribution of households by number of earning members in the family					
No. of Family Members	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
1	47.0	38.6	34.8	39.8	40.5
2	34.0	40.0	43.2	36.3	38
3+	19.0	21.3	22.0	23.9	21.4
Total N	**11826**	**11924**	**8586**	**9124**	**41460**
Mean number of household members	**1.9**	**2.0**	**2.0**	**2.0**	**1.9**

2.5 OCCUPATIONAL STRUCTURE

The occupational structure of the head of the household is typical of rural areas with forty percent being involved in casual labour (farm/non farm) and another around one third in farming / agricultural practice. This shows the pressure on agriculture still continues to be high in Odisha as revealed from the category-wise working population figures. Eleven percent each were engaged in trading or some kind of small business and salaried employment. Those retired or involved in other kinds of occupations account for 5 percent of all surveyed households (Table 2.6). The occupational structure of the head of the house holds was more or less similar in the four quarters.

Table 2.6: Main occupation of the head of the household					
Percent distribution of the head of the households by main occupation					
Occupation	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
Farming/Agriculture	33.2	30.2	31.7	36.0	32.7
Casual labour (farm/non-farm)	38.3	41.5	42.7	38.6	40.2
Salaried employment	11.3	11.0	10.8	9.6	10.7
Trading/Small Business	12.3	11.8	9.1	9.7	10.9
Retired	1.6	1.7	1.9	2.3	1.8
Other	3.2	3.7	3.8	3.8	3.6
Total N	**11826**	**11924**	**8586**	**9124**	**41460**

2.6 POSSESSION OF BPL CARD

Households were asked about ownership of a Below Poverty Line (BPL) card which is issued by the government and identifies households residing below the official poverty line. Fifty seven percent of all households reported to have a BPL card. Only 35 percent could show the BPL card (Table 2.7). This finding are more or less similar in the four quarters.

Table 2.7: Ownership of BPL card					
Percent distribution of the households by ownership of BPL card					
Ownership of BPL card	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
Yes (Card Shown)	38.0	37.9	35.5	27.3	35.0
Yes (Card Not Shown)	20.0	20.9	20.5	25.9	21.6
No	42.0	41.2	44.0	46.8	43.5
Total N	**11826**	**11924**	**8586**	**9124**	**41460**

Respondents were also asked if they owned a ration card (which enables them to receive food items at subsidized rates). Table 2.8 shows, only one third of all surveyed households reported having a ration card. There was not much difference in this regard across different quarters.

Table 2.8: Ownership of ration card					
Percent distribution of the households by ownership of ration card					
Ownership of Ration card	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
Yes	34.1	32.4	37.2	33.4	34.1
No	65.3	67.3	62.5	66.4	65.5
Don't Know	0.6	.3	0.3	0.3	0.4
Total N	**11826**	**11924**	**8586**	**9124**	**41460**

Among those in possession of a ration card, inquiries were also made with respect to regularity with which ration was received by such households. As can be observed from Table 2.9, majority of households with ration card reportedly received ration on a regular basis (91 percent). Only 6 percent mentioned getting rations intermittently, while less than 1 percent said that they 'rarely' get rations. The above findings are almost similar in the four quarters.

Table 2.9: Regularity in getting ration from the government ration shop among the households possessing a ration card					
Percent distribution of the households by regularity in using the ration card					
Ownership of Ration card	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
Regularly	90.7	91.7	91.3	91.6	91.3
Not regularly	6.8	6.7	6.8	4.5	6.3
Rarely	1.7	.6	.4	0.5	0.9
Not used	0.8	1.0	1.4	3.4	1.6
Total N	**4032**	**3864**	**3194**	**3047**	**14137**

2.7 WEALTH QUINTILE

A wealth index has been developed as an additional background characteristic to gauge the economic status of households covered in the survey. The index has been constructed using household asset data and housing characteristics[1]. The asset quintiles are expressed as the quintiles or groups of individuals constituting one fifth of the population belonging to each of the five economic strata. The socio economic status is defined in terms of assets or wealth rather than in terms of income and expenditure

This Wealth quintiles were further used to segregate the households into three economic strata namely low (1st and 2nd Quintiles), medium (3rd and 4th Quintiles) and high (5th Quintile).

[1] The CCM wealth index is based on the following 6 housing characteristics and assets: Type of Housing (kuccha, semi-pucca, pucca); Source of Drinking Water (tap water, well water, hand pump/bore well, surface water); Sanitary latrine; Electrification; Type of cooking fuel used (wood, crop residues, cow dung cakes, coal/coke/lignite, kerosene, biogas, electricity, LPG); Ownership of household/consumer durable assets (mattress, cot or bed, clock/watch, electric fan, bicycle/rickshaw, radio/transistor, sewing machine, telephone, refrigerator, TV b&w/colour, motorcycle/scooter/moped).

Analyses of the data on wealth index in KBK and non KBK districts reveal a large gap between the two categories of districts. In the KBK districts majority of the household were in lower economic strata (62%) while in non KBK districts majority of the households were in the medium (44%) to higher (26%) economic strata (Table 2.10). The findings in this regard are more or less similar in the four quarters.

Table 2.10: Wealth index of the household

Percent distribution of the households by wealth quintiles

Wealth index	KBK districts					Non KBK districts				
	Q1	Q2	Q3	Q4	Consolidated	Q1	Q2	Q3	Q4	Consolidated
Low	63.1	62.7	61.2	58.5	61.5	27.8	28.4	31.0	31.6	29.7
Medium	30.8	30	31.3	33.2	31.4	44.9	45.0	43.8	42.9	44.1
High	6.0	7.2	7.5	8.3	7.1	27.3	26.6	25.3	25.4	26.3
Total N	**4062**	**4030**	**2553**	**2882**	**13527**	**7764**	**7894**	**6033**	**6242**	**27933**

The findings on socio-economic profile the head of the households presented in this chapter indicates the backwardness of the state with relatively lower level of education, higher proportion of house holds belonging to the disadvantaged caste groups, higher family size, higher dependence burden on the earning members and excessive dependence on the occupations like casual labor and further farming / agricultural practices. Further a higher proportion of the households especially in the KBK districts belong to lower economic strata in terms of their wealth index

CHAPTER III: CHILD HEALTH AND NUTRITION

Children below the age of six years are highly vulnerable to malnutrition and morbidity. Hence the ICDS scheme has principal focus on improving nutritional and health status of 0-6 year children. The package of services provided to improve health and nutrition status of children includes supplementary nutrition, growth monitoring, immunization, health check ups and referral services. Besides, the scheme deliberates on providing education and counseling to mothers for promoting better child health and nutritional practices. The concurrent monitoring study has attempted to capture the practices associated with various parameters related to children's health and nutrition. Some of the key parameters covered in this context include child feeding practices, incidence of childhood illness, immunization and Vitamin-A supplementation. The nutrition status of children in the age group of 0-59 months has also been discussed in detail in this chapter. The information pertaining to the child was collected from mother of the child selected for the concurrent monitoring study. The results are outlined in the subsequent sections.

3.1 CHILD FEEDING PRACTICES

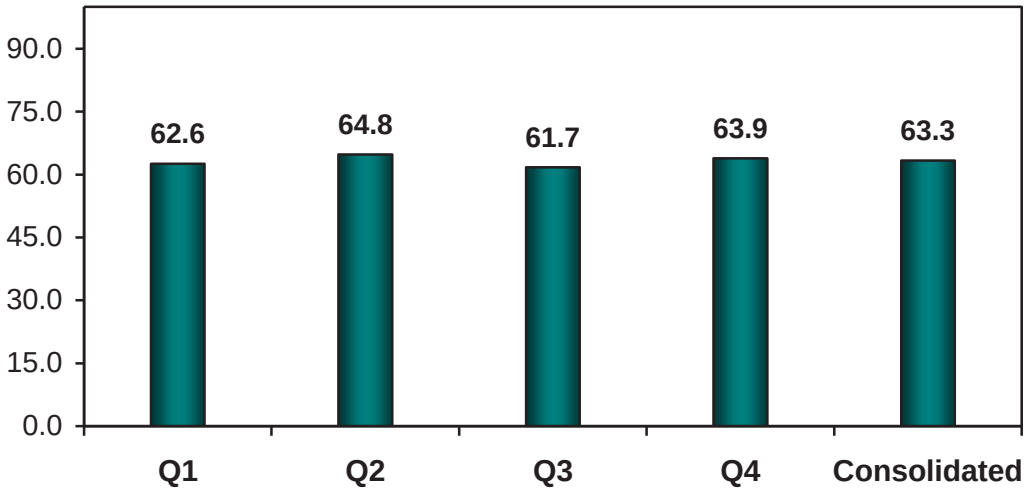
Appropriate infant feeding practices have significant positive effect on the health and nutrition status of the child. Breastfeeding improves the nutritional status of young children and reduces morbidity and mortality. Breast milk not only provides important nutrients but also protects the child against infections. The timing and type of complementary food introduced for the child also has significant effects on nutritional status of the child. The concurrent monitoring study has attempted to address the above issue through interviews among the mothers of 0-23 month's children.

Initiation of breast feeding

Initiation of breast-feeding immediately after child's birth is important for both mother and the child. It is recommended that the newborn should be put to breast within one hour of birth. In this context the concurrent monitoring study has collected information on timing of initiation of breast-feeding the baby from the mothers of children aged 0-23 months.

Figure 3.1 shows that over three-fifth (63 percent) of the children aged 0-23 months were put to the breast immediately after birth. The corresponding percentage in NFHS 3 and DLHS 3 was 55 percent and 63 percent respectively. The initiation of breast feeding within one hour of birth did not vary much between the four quarters.

Fig. 3.1: Percent of mothers (0-23 months) who initiated breast feeding within one hour of birth



The proportion of mothers initiating breast feeding within one hour of birth was similar across both categories of mothers. Across caste groups the proportion of children who received breast feeding within one hour of birth varied between 57percent among scheduled tribes to 69 percent among other castes. The initiation of breast feeding within one hour was higher in case of the mothers belonging to higher wealth quintiles as well as for the women having higher level of education. A higher proportion of the women in the non KBK districts than the KBK districts reported that they had initiated breast feeding within one-hour of birth. (Table 3.1)

Table 3.1 Initiation of breastfeeding within one hour of birth	
Percent age of mothers (0-23 months children) who initiated breastfeeding within one hour of birth of the child by background characteristics (CCM- Consolidated)	
Characteristics	**Percent**
Category of mother	
Mothers of 0-6 months children	63.4
Mothers of 6-23 months children	63.2
Caste	
Scheduled caste	64.6
Scheduled Tribe	57.4
OBC	64.9
Other caste	69.1
Wealth Quintile	
Lowest	60.8
Second	56.8
Middle	63.9
Fourth	67.5
Highest	66.9
Education of the women	
Illiterate	59.1
Upto primary	63.8

Middle	65.7
High school	67.7
Higher secondary and above	66.7
Type of district	
KBK districts	60.2
Non KBK districts	64.8
Total	63.3
Total N	**13506**

As the following map shows in the district of Balesore breast feeding was initiated within one hour of birth in case of over four-fifth of the children. In 11 out of the 30 districts less than 60 percent of the mothers had initiated breast feeding within one hour of birth. Figure 3.2 shows that in 87 out of the 314 blocks over 80 percent of the children had received breast feeding within one-hour of birth. In 46 blocks less than 40 percent of the children were given breast feeding within one hour of birth.

Map: 2- Percentage of mothers of children 0-23 months who initiated breastfeeding within 1 hour of birth by districts (CCM - Consolidated)

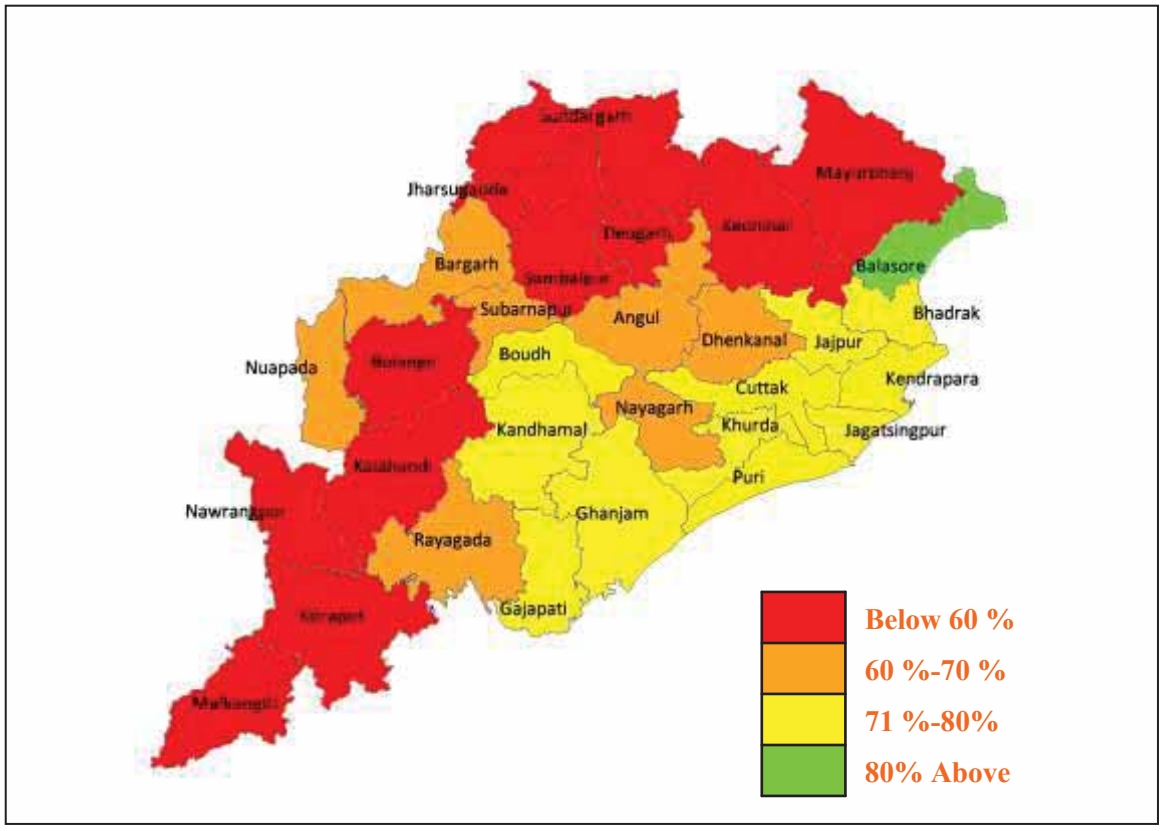
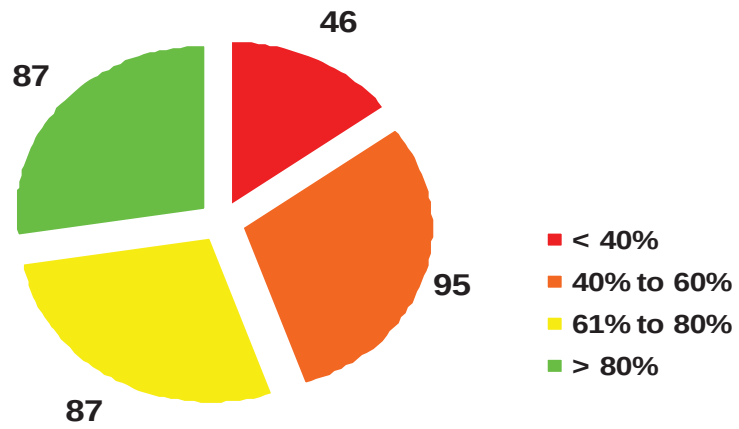


Fig.3.2: Number of blocks by percentage of children (0 to 23 months) breastfed within one hour of birth



Colostrums feeding practices

It is recommended that the first breast milk containing colostrums should be given rather than squeezed from the breast and discarded as it provides natural immunity to the child. Figure 3.3 shows that over two-third of the mothers (73%) of children 0-23 months did not squeeze out the first milk (colostrums) from the breast before they initiated breastfeeding. The practice of feeding colostrums was reported by relatively higher proportion of mothers covered in Q3 (76%) and Q4 (76%) than those covered in Q1 (67%) and Q2 (73%).

Fig. 3.3: Percent of mothers who did not squeeze out the first milk before the child was put to breast

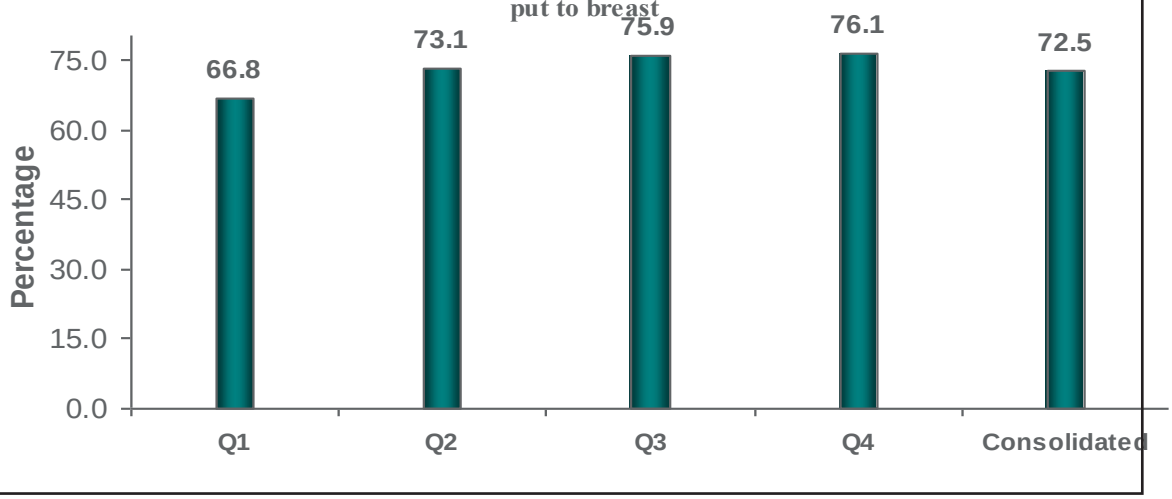


Table 3.2 provides information on colostrums feeding practices by background characteristics of the mothers. The practice of colostrums feeding was higher among the mothers of 0-6 month's children as compared to mothers of 6-23 month's children. In general the practice of feeding colostrums to the new born did not vary much by caste, wealth index and education of the

mothers. The practice of feeding colostrums was reported by a relatively higher proportion of mothers in the Non KBK districts (74%) compared to the KBK districts (70%).

Table 3.2 Feeding of colostrums to the child	
Percentage of children (0-23 months) who were fed colostrums by background Characteristics (CCM- Consolidated)	
Characteristics	**Percent**
Category of mother	
Mothers of 0-6 months children	75.6
Mothers of 6-23 months children	67.8
Caste	
Scheduled caste	72.1
Scheduled Tribe	70.6
OBC	75.4
Other caste	70.0
Wealth Quintile	
Lowest	71.1
Second	72.3
Middle	72.5
Fourth	73.2
Highest	73.5
Education of the women	
Illiterate	69.7
Upto primary	73.3
Middle	74.7
High school	71.6
Higher secondary and above	76.0
Type of district	
KBK districts	69.8
Non KBK districts	73.8
Total	**72.5**
Total N	**13506**

Map: 3- Percentage of 0-23 month's children who were fed colostrums by districts (CCM - Consolidated)

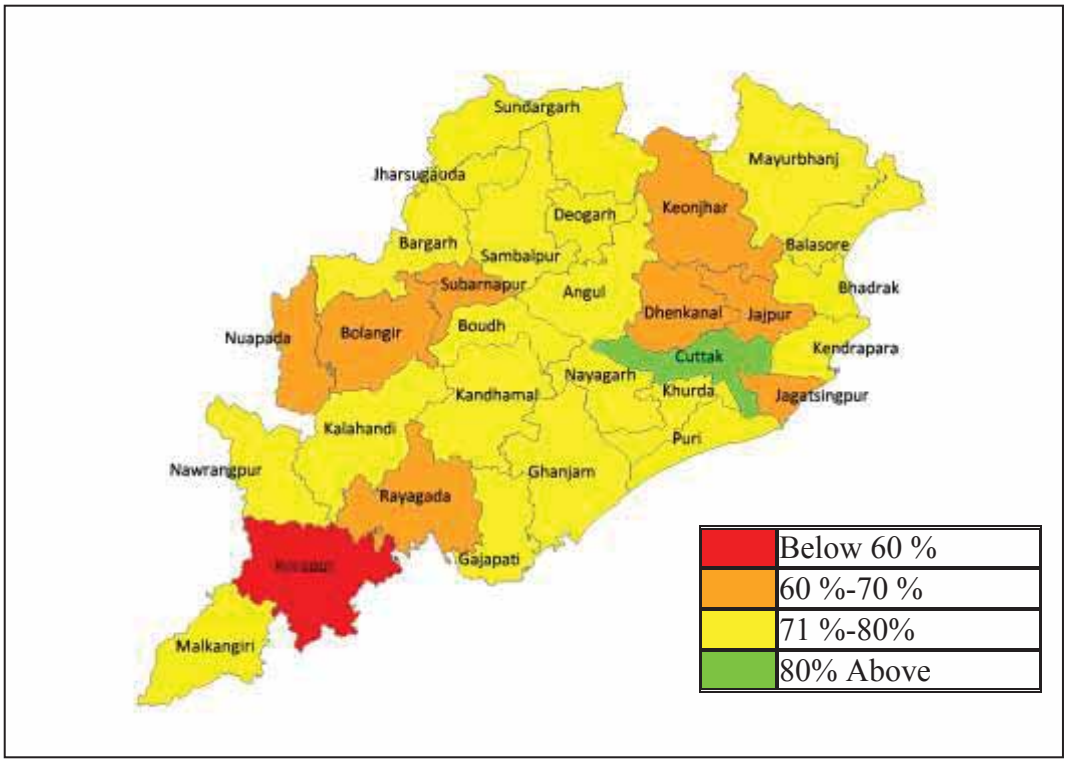
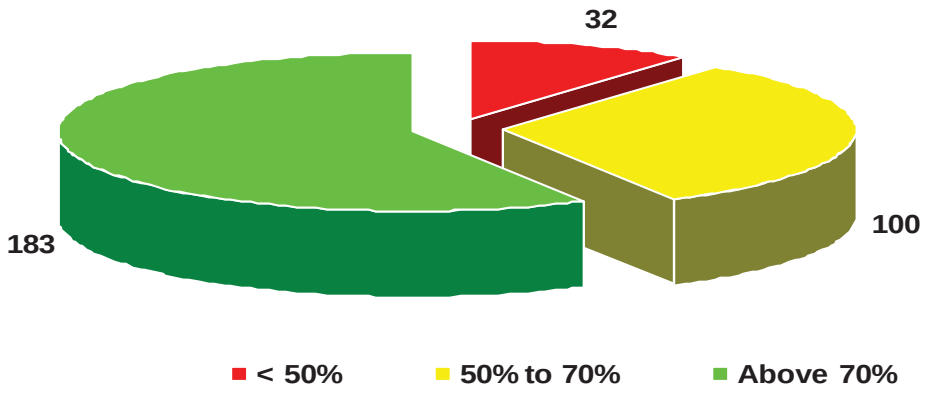


Figure 3.4 shows the distribution of blocks according to percentage of children who received colostrums feeding. In 58 percent of the blocks (183 out of 314), over 70 percent of the children in the age group of 0 to 23 months had received colostrums feeding. In 32 blocks less than 50 percent of the children were fed colostrums.

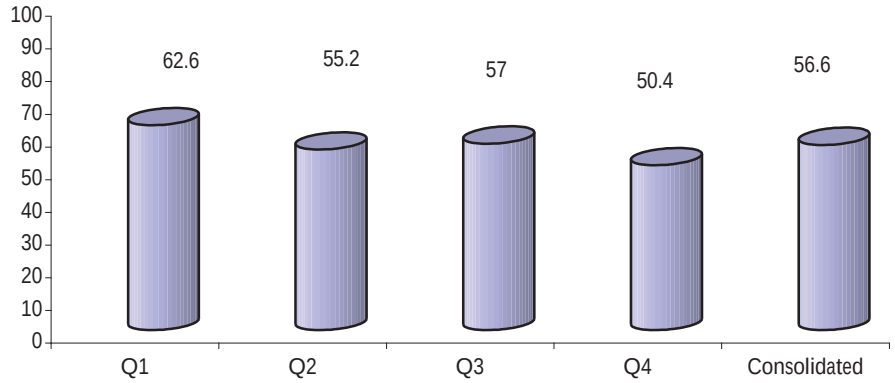
figure 3.4: Number of blocks by percentage of children (o to 23 years) who were fed colostrums



Exclusive breast feeding practices

Exclusively breastfeeding for first six months after the birth is very essential for normal physical and mental growth of the child. The concurrent monitoring study shows that nearly three-fifth of the children in the age group of 0-23 months were exclusively breastfed for 6 months (Figure 3.5). This percentage in DLHS 3 was 43 percent. The percentage of mothers reporting exclusive breast feeding up to 6 months of age was higher in Q1 (63%) than Q2 (55%) , Q3 (57%) and Q4 (50%).

Fig. 3.5: Percent of children 6-23 months exclusively breastfed upto 6 months



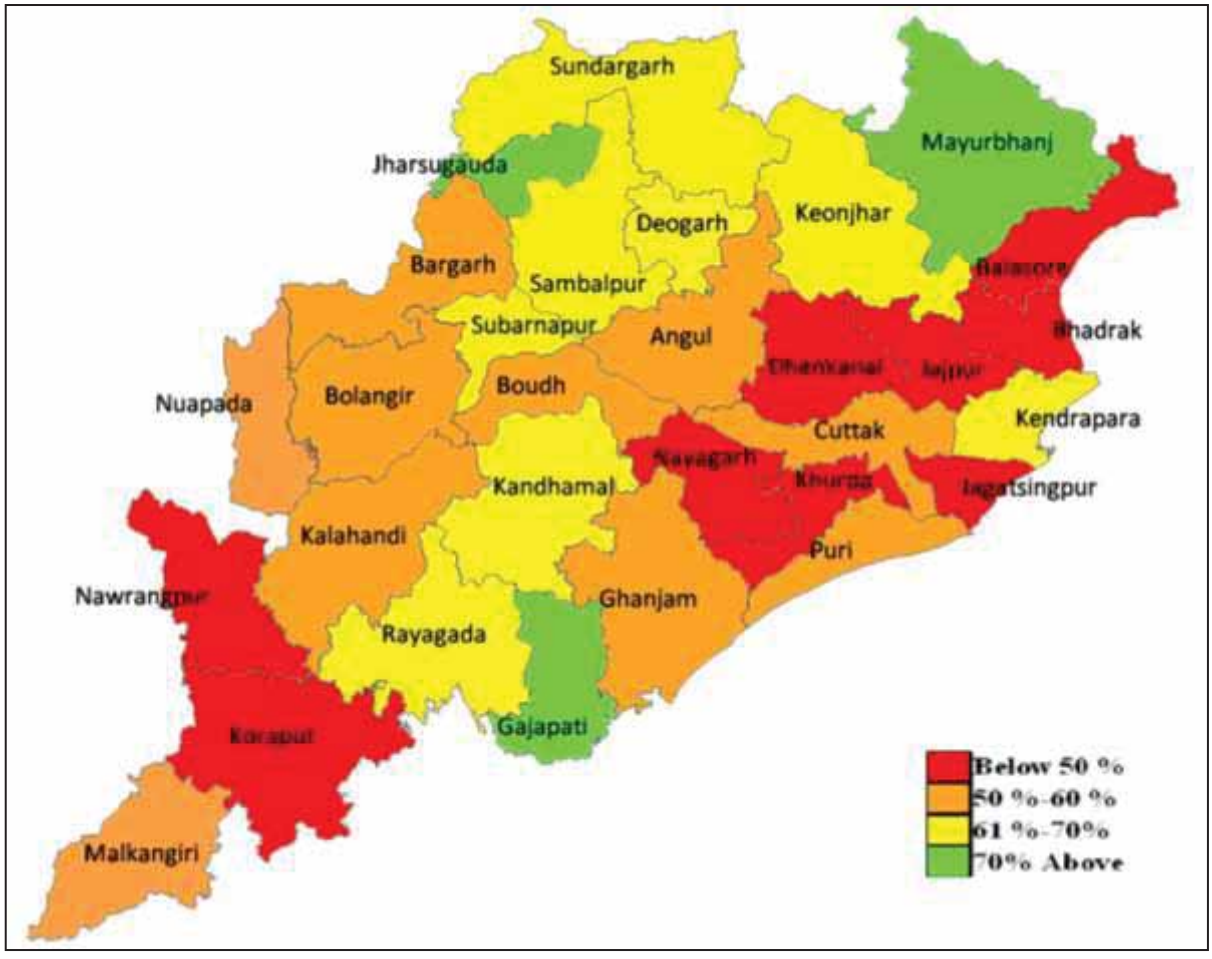
Across caste groups the proportion of mothers reporting exclusive breast-feeding for 6 months was relatively lower among the mothers belonging to OBC (55 percent) and scheduled castes (55 percent) and highest among the mothers from scheduled tribe communities (60 percent). Analysis by wealth index shows that the exclusive breast feeding up to six months of age was highest in the lowest wealth quintile (59%) and lowest in the highest wealth quintile (52%). The analysis of exclusive breast feeding practices by education of the mother did not show any consistent patterns. The proportion of mothers reporting exclusive breast feeding the child up to six months was more or less similar in the KBK and non KBK districts .

Table 3.3 Exclusively breast feeding up to 6 months of age	
Percentage of children (6-23) months who were exclusively breastfed for 6 months by background characteristics (CCM - Consolidated)	
Characteristics	**Percent**
Caste	
Scheduled caste	54.8
Scheduled Tribe	60.4
OBC	54.5
Other caste	56.5
Wealth Quintile	
Lowest	59.4
Second	56.5
Middle	57.0

Fourth	58.0
Highest	51.6
Education of the women	
Illiterate	58.5
Upto primary	54.5
Middle	55.3
High school	60.2
Higher secondary and above	56.2
Type of district	
KBK districts	57.7
Non KBK districts	56.1
Total	56.6
Total N	**5306**

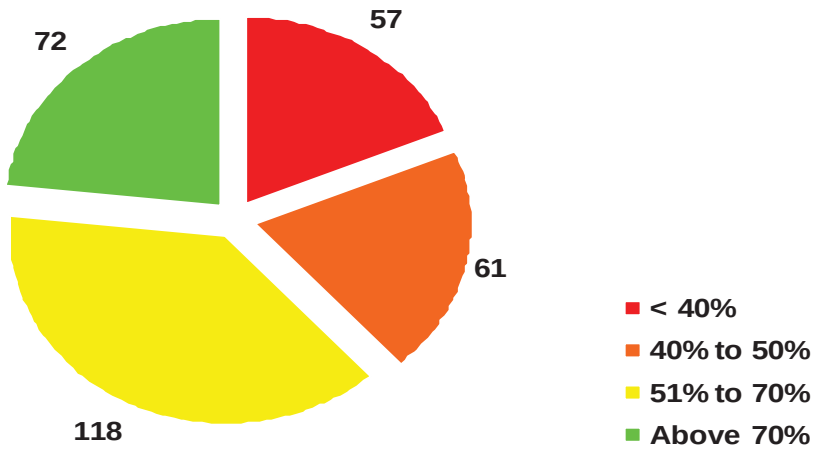
As the following map shows the proportion of mothers reporting exclusive breast feeding up to 6 months of age was low (less than 50 percent) in the districts of Malkanagiri, Nawarangpur, Koraput, Nuapada, Dhenkanal, Nayagarh, Jajpur, Balasore, Bhadrak and Jagatsinghpur.

Map 4: Percentage of children (6-23 months) received exclusive breast feeding for 6 months by districts (CCM- Consolidated)



The figure 3.6 shows the distribution of blocks according to percentage of children who received exclusive breast feeding for 6 months. In 118 out of the 314 blocks, over 70 percent of the children in the age group of 6 to 23 months were exclusively breast fed for 6 months. In 57 blocks less than 40 percent of the children were exclusively breast fed up to 6 months of age.

Figure 3.6: Number of blocks according to percentage of children (6-23 Months) who received exclusive breastfeeding for 6 months

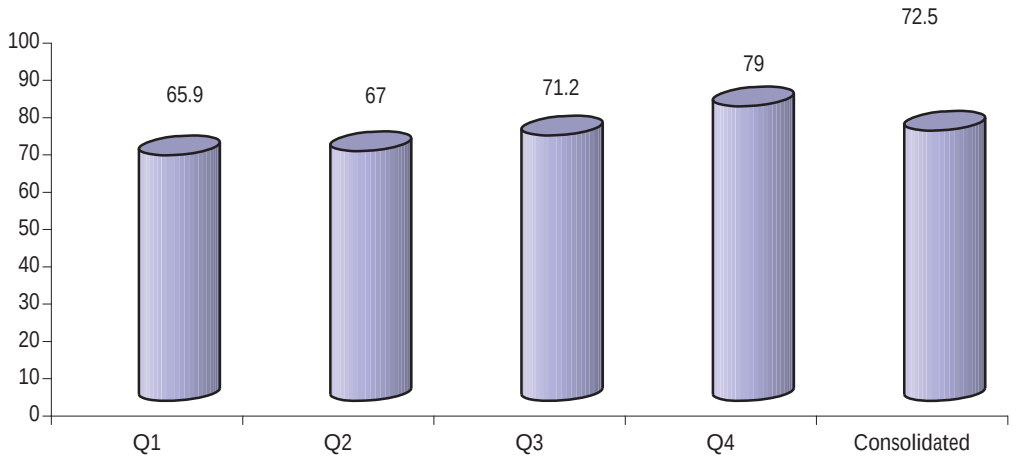


Complementary feeding practices

The timely introduction of complementary food is very critical in meeting the protein, energy and micronutrient needs of children. It is recommended that the child should be given solid or semi solid food along with the breast milk between the ages of 6 to 8 months.

The concurrent monitoring study shows that among the children in the age group of 6-23 months 73 percent were introduced complementary food between the recommended ages of 6-8 months (Figure 3.7). This percentage was relatively higher in Q4 (79%) and Q3 (71%) than Q1 (66%) and Q2 (67%).

Fig. 3.7: Percent of children 6-23 months who received complementary feeding between 6 to 8 months of age



The analysis of complementary feeding practices by background characteristics of the mothers has been presented in Table 3.4. As compared to other caste women the women from scheduled tribe communities are more likely to introduce complementary feeding between 6-8 months of age. The complementary feeding practices did not vary much by wealth index and education of the mothers. A higher proportion of the mothers in the KBK districts (77%) than the non KBK (71%) districts reported introduction of complementary feeding when the child was aged between 6 to 8 months.

Table 3.4 Age at introduction of complementary feeding among children 6-23 months	
Percentage of children(6-23 months) who were given complementary food between 6 to 8 months of age by background characteristics (CCM- Consolidated)	
Characteristics	**Percent**
Caste	
Scheduled caste	72.5
Scheduled Tribe	78.3
OBC	71.5
Other caste	64.3
Wealth Quintile	
Lowest	74.1
Second	72.1
Middle	74.2
Fourth	73.7
Highest	68.6
Education of the women	
Illiterate	74.6

Upto primary	70.8
Middle	71.7
High school	74.5
Higher secondary and above	71.7
Type of district	
KBK districts	76.6
Non KBK districts	71.1
Total	**72.5**
Total N	**3358**

Receiving of supplementary food from AWC

Severe protein energy malnutrition (PEM) is one of the important factors associated with high infant and child mortality rate. The government continues to accord high priority to the supplementary nutrition programme in ICDS, to fight macro and micronutrient deficiencies among children below 6 years. ICDS programme attempts to bridge the calorific gap between the national recommended and actual average nutritional in-take of children especially from disadvantaged communities by providing supplementary feeding support through Anganwadi centers. In the present study, the mothers of children 6 to 72 months were asked about nutritional supplement received by them from AWC and number days for which they received supplementary food from AWC. The ICDS programme is expected to ensure that supplementary feeding is made available to the children at least for 21 days in a month. However, it is quite discouraging to note that among the children receiving supplementary food only 52percent (Q1 55%, Q2 51% , Q3 51% and Q4 535) reported receipt of supplementary food from AWC for at least 21 days. This finding implies that there is a need to accord more emphasis to supply supplementary food to the children on a continuous basis.

The average number of days for which SNP was received by the children was 19.9 days . It was almost similar in all the three quarters. The average number of days for which SNP was received from AWC was higher for children belonging to scheduled tribes, children from lower wealth quintiles and for the children whose mothers were illiterates (Table 3.5). The average number days SNP received was higher for the children in KBK districts (21.1) than the non KBK districts (19.3). The average number of days SNP received did not vary by gender of the child.

Figure 3.8: Receiving of SNP from AWC

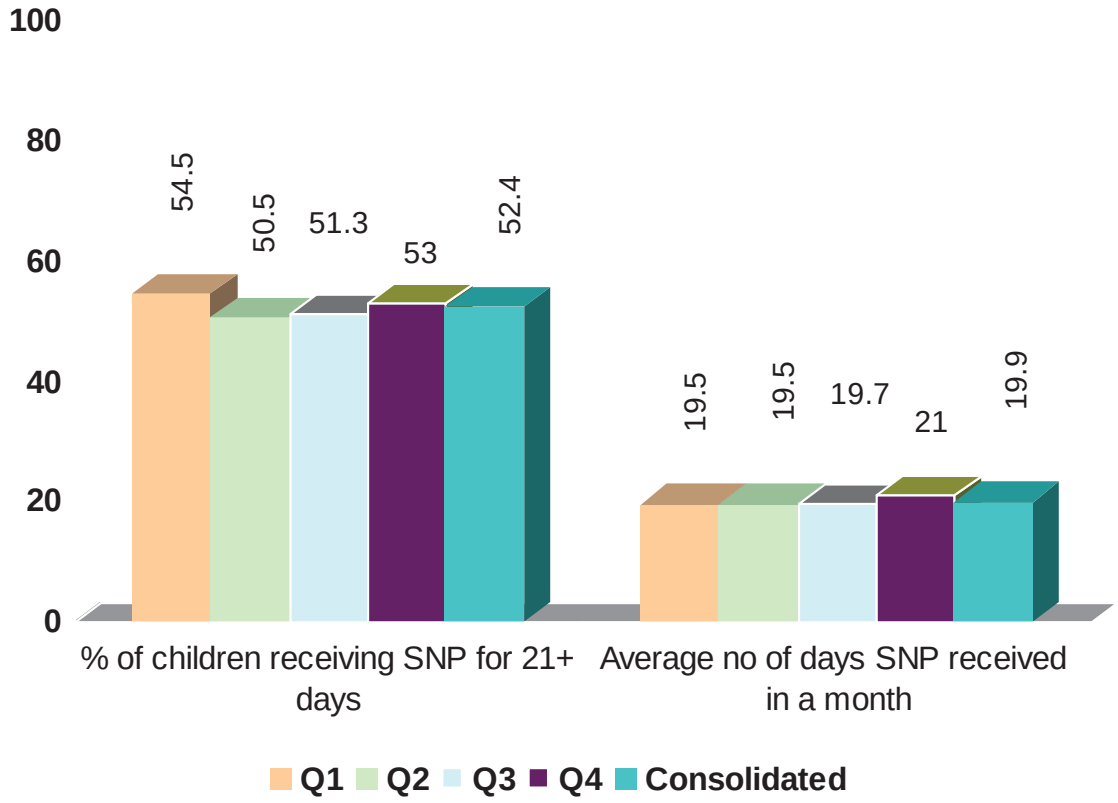
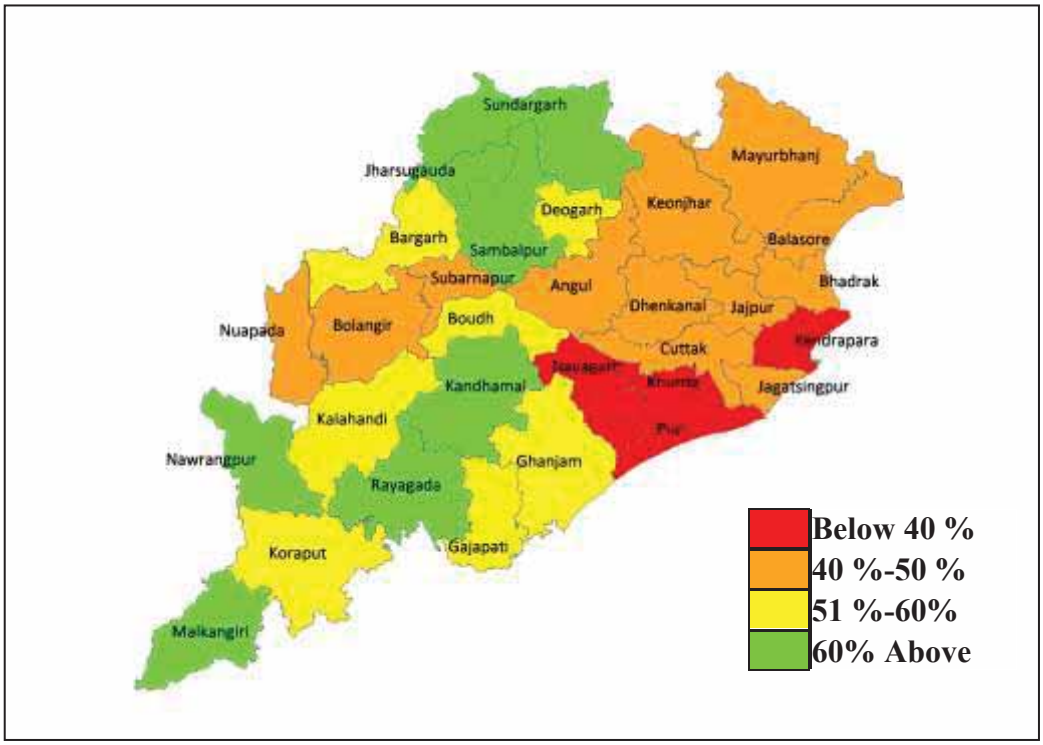


Table 3.5: Average number of days the child (6-72 month) received SNP from AWC in last 1 month by background characteristics (CCM-Consolidated)	
Characteristics	**Average**
Caste	
Scheduled caste	20.0
Scheduled Tribe	20.7
OBC	19.3
Other caste	19.5
Wealth Quintile	
Lowest	20.3
Second	19.9
Middle	20.3
Fourth	19.7
Highest	19.1
Education of the women	
Illiterate	20.5
Upto primary	19.5
Middle	19.7
High school	19.6
Higher secondary and above	18.9
Type of district	

Table 3.5: Average number of days the child (6-72 month) received SNP from AWC in last 1 month by background characteristics (CCM-Consolidated)	
Characteristics	**Average**
KBK districts	21.1
Non KBK districts	19.3
Sex of the Child	
Male	19.8
Female	19.9
TOTAL	**19.9**
TOTAL (N)	**12446**

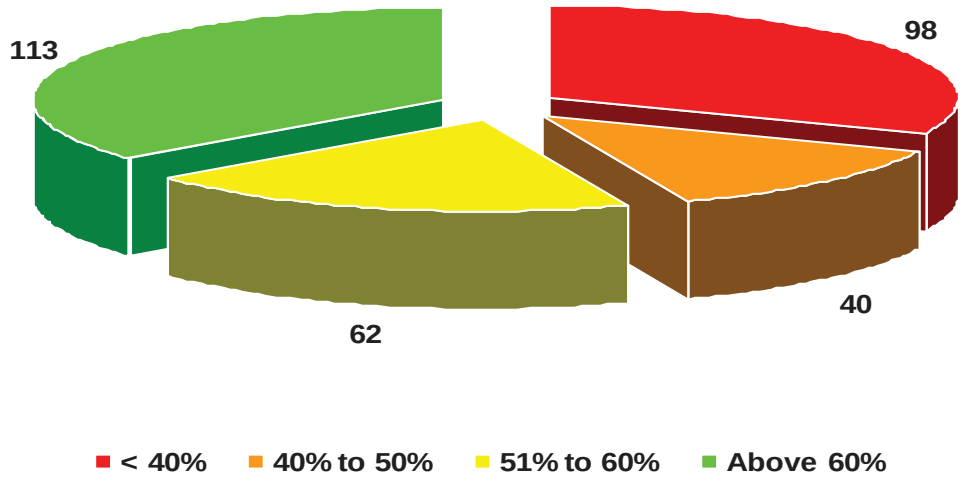
As the following map shows, less than 40 percent of the children mostly in the coastal districts like Kendrapara, Khurda , Nayagarh and Puri reported receipt of supplementary food for less than 21 days. Over 60 percent of children in Sundergarh, Jharsuguda, Sambalpur, Kandhamal, Rayagada, Malkanagiri and Nawarangpur reported receipt of SNP from AWC for more than 21 days.

Map 5: Percentage of children received feeding from AWC for 21 days or more by districts (CCM-Consolidated)



As the following figure shows in 113 out of the 314 blocks covered in four quarters over 60 percent of the children had received SNP for more than 21 days. However, in 98 blocks, less than 40 percent of the children reported receipt of SNP for more than 21 days.

Figure 3.9: Number of Blocks by Percentage of Children Who received SNP for 21+ days



3.2 CHILD IMMUNIZATION

Immunization of children against six vaccine preventable diseases has been a corner stone of child health care system in our country. As one of the objectives of the ICDS programme is to promote immunization services, the anganwadi worker acts as a facilitator for the immunization programme implemented by the health department. Often the anganwadi premises are being used for providing immunization services. The primary task of the anganwadi worker is to co-ordinate immunization of all children in her work area in collaboration with the ANM on fixed immunization days.

For each child covered in the concurrent monitoring study the mother of the child was asked whether he/she had a vaccination card. If a vaccination card was available, the interviewer was required to observe the card and record each vaccination received by the child. For vaccinations not recorded on the card, the mother's report that the vaccination was or was not given was accepted. If the mother was not having a vaccination card, she was asked whether the child had received any vaccination. If any vaccination had been received, the mother was asked whether the child had received a vaccination against tuberculosis (BCG), diphtheria, whooping cough and tetanus (DPT), Poliomyelitis (Polio) and measles. For DPT and polio, information was obtained on the number of doses of the vaccine given to the child. The information on child immunization has been presented in this section.

Overall, a vaccination card was available for 96 percent of the children covered in the concurrent monitoring study (Table 3.6). This included 79 percent of the cases who actually could show the card to the interviewer at the time of the interviews. For the rest of the 21 percent of the children the immunization status of the child was ascertained based on the verbal response of the mother. There was not much variation between the three quarters in this regard.

Table 3.6 Availability of vaccination card for the child					
Percent of children in the age group of 12-23 months for whom vaccination card is available					
Particulars	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
Yes , Card Seen	75.2	81.8	82.0	84.9	81.0
Yes, Card Not seen	19.4	14.8	14.4	13.6	15.6
No Card	5.3	3.5	3.6	1.4	3.5
Total N	**1034**	**897**	**755**	**916**	**3602**

Table 3.7 shows the percentage of children aged 12-23 months who received specific vaccinations. The 12-23 months age group was chosen for analysis because both international and Government of India guidelines specify that children should be fully immunized by the time they complete their first year of life. Table 3.7 shows that 92 percent of children in the age group of 12-23 months had received the BCG vaccine. Eighty seven and eighty four percent of the children were given at least three doses of polio and DPT respectively. The measles vaccine was received by 85 percent of the children.

Table 3.7 Immunization status of children aged 12-23 months					
Percent distribution of the children 12-23 months according to their vaccination coverage					
Particulars	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
BCG	90.0	91.2	91.9	95.7	92.2
Polio 3	81.4	86.0	88.9	91.7	87.0
DPT 3	81.2	81.9	83.2	90.3	84.2
Measles	83.0	81.6	85.0	91	85.2
Fully Immunized	72.1	72.7	76.7	84.8	74.2
Total N	**1034**	**897**	**755**	**916**	**3602**

Figure 3.10 shows the proportion of children in the age group of 12-23 months who were fully immunized. The children in the age group of 12-23 months who had received BCG, Measles and three doses each of DPT and Polio (excluding polio 0) have been considered as fully immunized. The concurrent monitoring study shows that in all the three quarters 74 percent of the children aged 12-23 months were fully immunized. Comparison with NFHS 3 (52 percent) as well as DLHS 3 (61 percent) data shows significant progress in the proportion of children fully immunized.

Figure 3.10: Children 12-23 months fully immunized

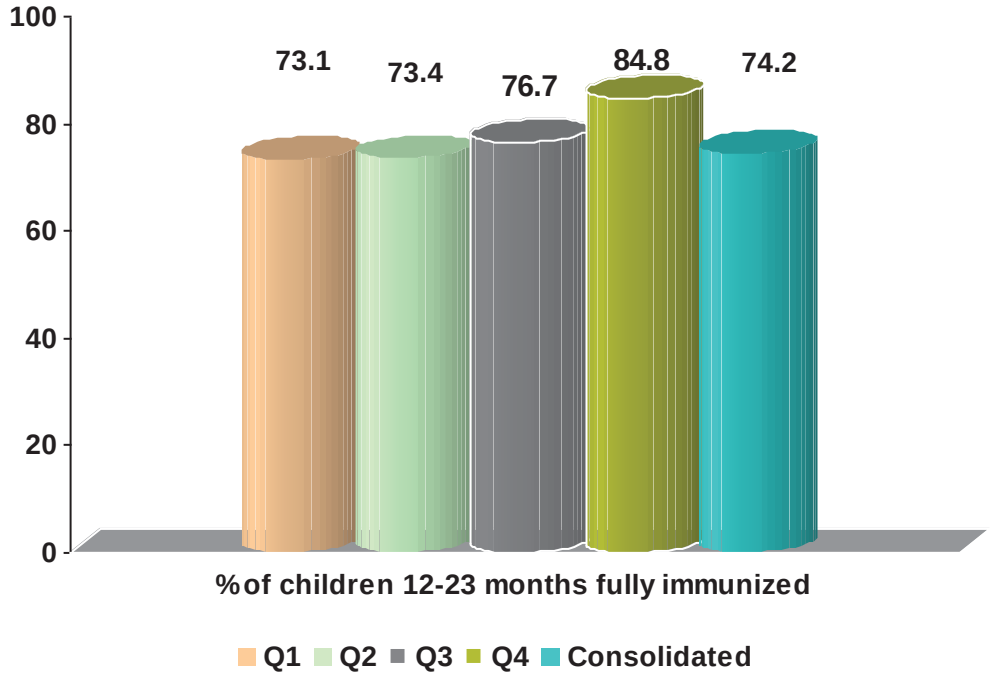


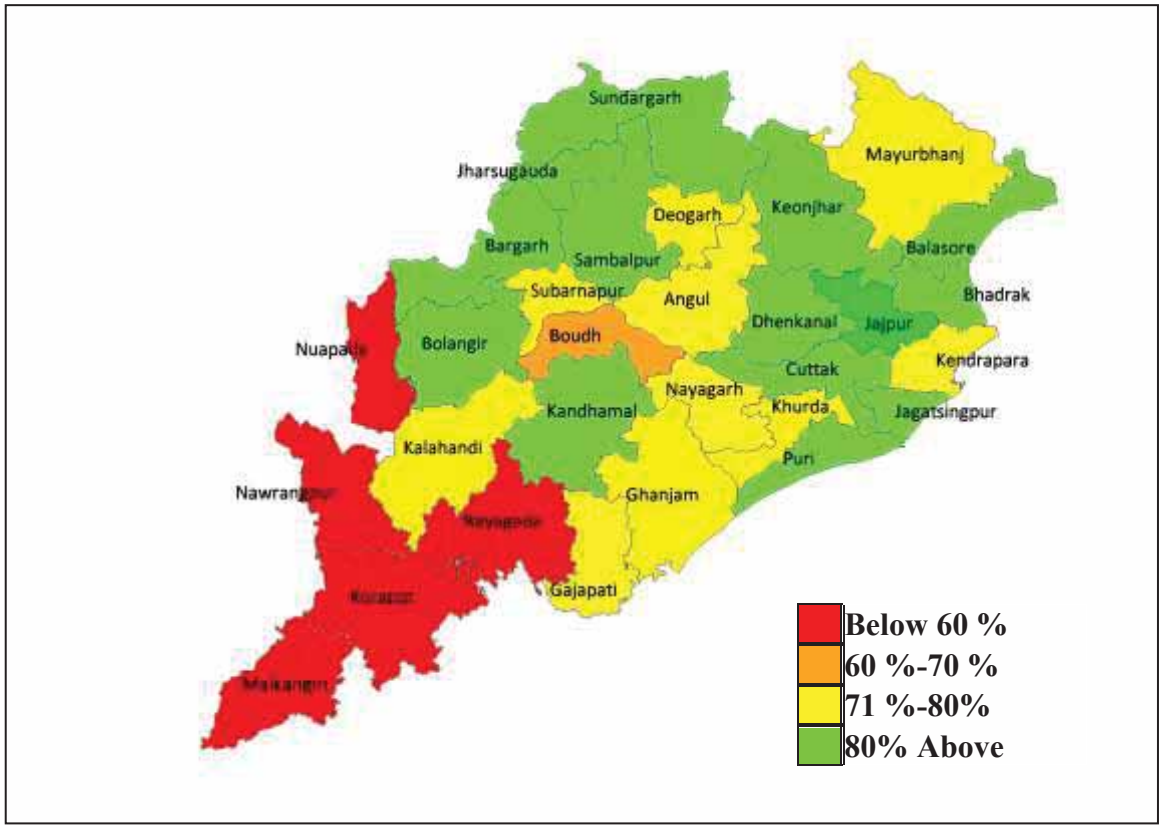
Table 3.8 shows the proportion of children fully immunized by their background characteristics. The children belonging to scheduled tribe communities, children from the lowest and second wealth quintiles and children whose mothers are illiterates are less likely to be fully immunized. The proportion of children fully immunized was much higher in the non KBK districts (82%) than the KBK (65%) districts. A marginally higher proportion of the male than the female children were fully immunized.

Table 3.8: :Percentage of children (12-23 Months) fully immunized by background characteristics (CCM- Consolidated)	
Characteristics	**Percent**
Caste	
Scheduled caste	78.2
Scheduled Tribe	68.6
OBC	82.8
Other caste	76.6
Wealth Quintile	
Lowest	67.2
Second	71.9
Middle	75.8
Fourth	82.8
Highest	86.3
Education of the women	
Illiterate	64.8
Upto primary	78.2
Middle	85
High school	83.3

Table 3.8: :Percentage of children (12-23 Months) fully immunized by background characteristics (CCM- Consolidated)	
Characteristics	**Percent**
Higher secondary and above	86.9
Gender	
Male	77.4
Female	76.4
Type of district	
KBK districts	65.0
Non KBK districts	82.0
Total	**74.2**
Total N	**3602**

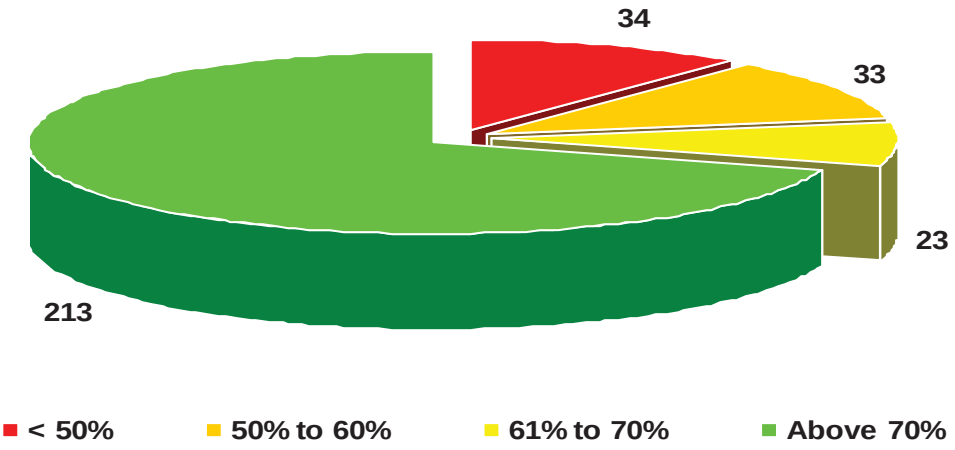
As the following map shows, the proportion of children fully immunized was quite low (below 60%) in the districts of Malkanagiri, Koraput, Nawarangpur, Rayagada and Nuapada.

Map 6: Percentage of 12-23 months children fully immunized (CCM- Consolidated)



In 213 out of the 314 blocks over 80 percent of the children were fully immunized. In 34 blocks less than 50 percent of the children were fully immunized (Figure 3.11).

Figure 3.11: Number of Blocks by Percentage of Children (12 to 23 months) Fully Immunized



3.3 CHILD NUTRITION

Children in rural areas are more vulnerable to malnutrition due to low dietary intake and poor health care and infectious diseases and inequality in food distribution. In this section nutritional status of children in the age group of 0-59 months have been assessed. Children's nutritional status has been estimated based on a new international reference population released by WHO in April 2006 (WHO Multi-Center Growth Reference Study Group, 2006) and accepted by the Government of India in August 2008. The new WHO growth standard adopts a prescriptive approach, describing how healthy children should grow. The new standard is based on children around the world (Brazil, Ghana, India, Norway, Oman, and the United States) who are raised in healthy environments, whose mothers do not smoke, and who are fed with recommended feeding practices (exclusive breastfeeding for the first 6 months and appropriate complementary feeding from 6 to 23 months)2.

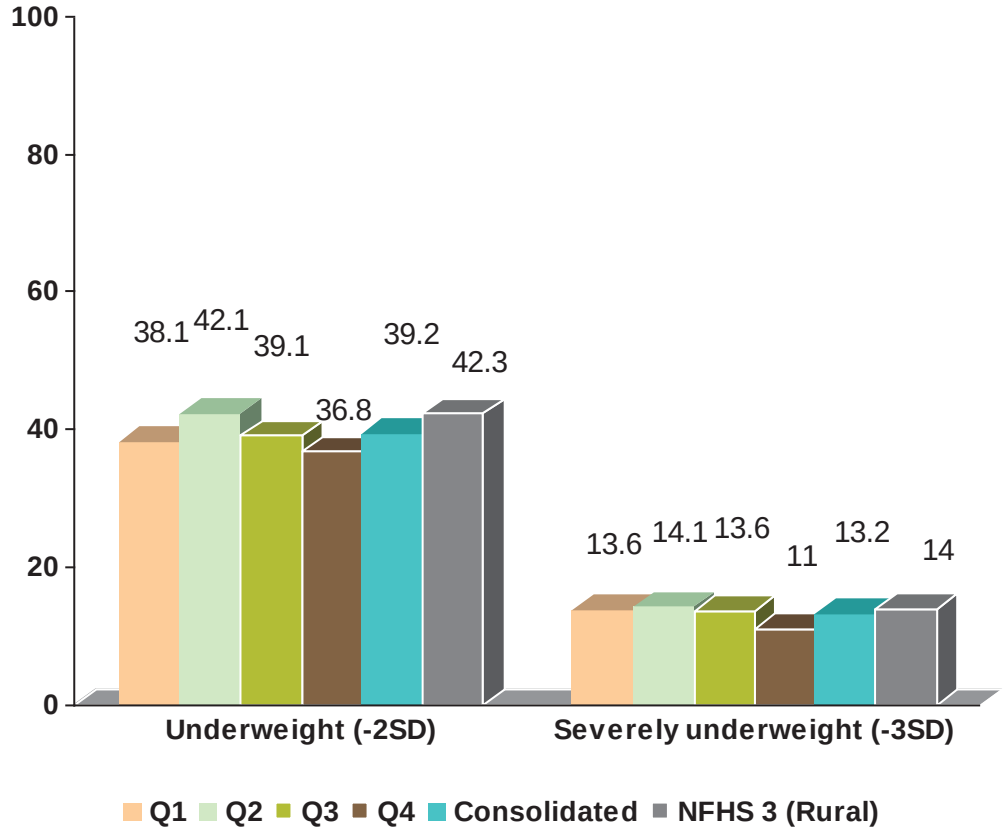
Weight for age (underweight) has been used to assess the nutritional status of the children. The Weight-for-age is a composite index of height-for-age and weight-for-height. It takes into account both acute and chronic malnutrition. Children whose weight-for-age is below minus two standard deviations from the median of the reference population are classified as underweight. Children whose weight-for-age is below minus three standard deviations (-3 SD) from the median of the reference population are considered to be severely underweight/malnourished. The index for 'weight-for-age' is expressed in standard deviation units (Z-Scores) from the median value of international standard. 'Weight-for-age' is a composite measure that takes into account both chronic and acute under nutrition. Children who are more than two Standard Deviation (SD) below the reference median on this index are considered to be 'underweight' and those having more than three SD below the reference median are termed as 'severely malnourished'. This analysis was performed using the WHO Anthro software version 3.1.0. The analysis of the nutrition status of the children has been presented in this section.

As per the weight for age index 39.2 percent children covered in the first four quarters of the concurrent monitoring study were found to be underweight (-2SD) while 13.2 percent were

[2] IIPS 2007 (National Family Health Survey 2005-06)

severely underweight (-3SD). As per NFHS 3, in rural areas of Odisha the proportion of underweight and severely underweight children was 42.3 and 14 percent respectively. The concurrent monitoring study shows almost 3 percentage point decline in the proportion of underweight children since NFHS 3. However, the concurrent monitoring study shows the proportion of severely underweight children has remained stagnant at 14 percent since the NFHS 3. This is a matter of concern and needs further investigations. The proportion of children who were underweight was higher in the second quarter (42 %) compared to the first (38%) , third (39.1%) and fourth (36.8%) quarter

Figure 3.12: Nutrition status of children 0-59 months (Weight for Age)



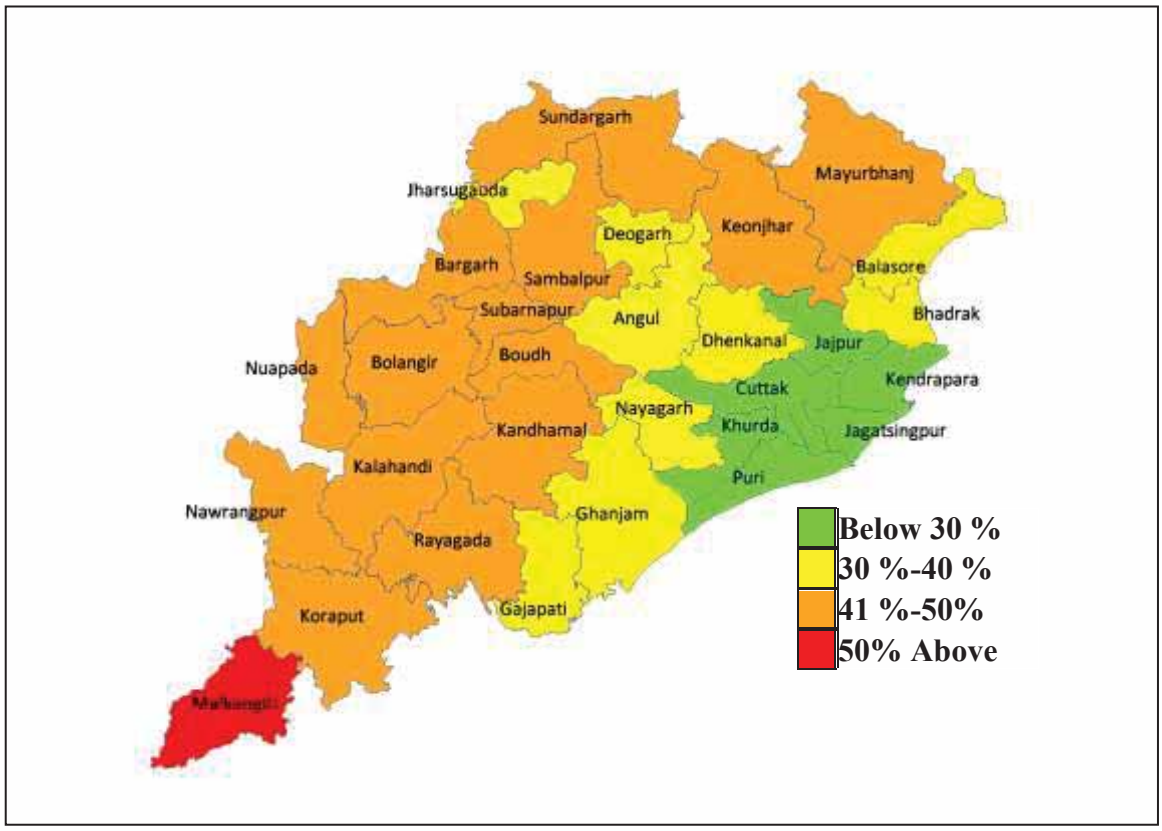
The proportion of undernourished as well as severely undernourished children was more or less similar for both boys and girls. Data disaggregated by caste reveals that moderate to sever undernourishment is higher among the vulnerable section of the community. Both below -2SD and below -3SD figures were found to be higher among the Scheduled and Scheduled caste communities (Table 3.9). Moderate undernourishment was highest at 49 percent among the Scheduled Tribe followed by Scheduled Caste (40%), OBC (36%) and other castes (29%).Under nutrition has a strong relationship with the mother's education. The percentage of children who are severely underweight is almost three times as high for children whose mothers are illiterates as for children whose mothers have higher secondary or above level of education. The table 3.9 further shows that the proportion of under weight as well as severely under weight children decreases steadily with an increase in the wealth index of the household. Children from households with a low standard of living are nearly two and half times as likely to be severely undernourished as children from households with a high standard of living. Data disaggregated by

KBK and non KBK districts reveals a distinct gap in the nutrition status of the children between the two categories of districts. Around 45 percent children in the KBK districts in comparison to 37 percent in non KBK districts were underweight. Similarly, 15 percent children were found to be severely underweight in the KBK districts against 12 percent in the non KBK districts.

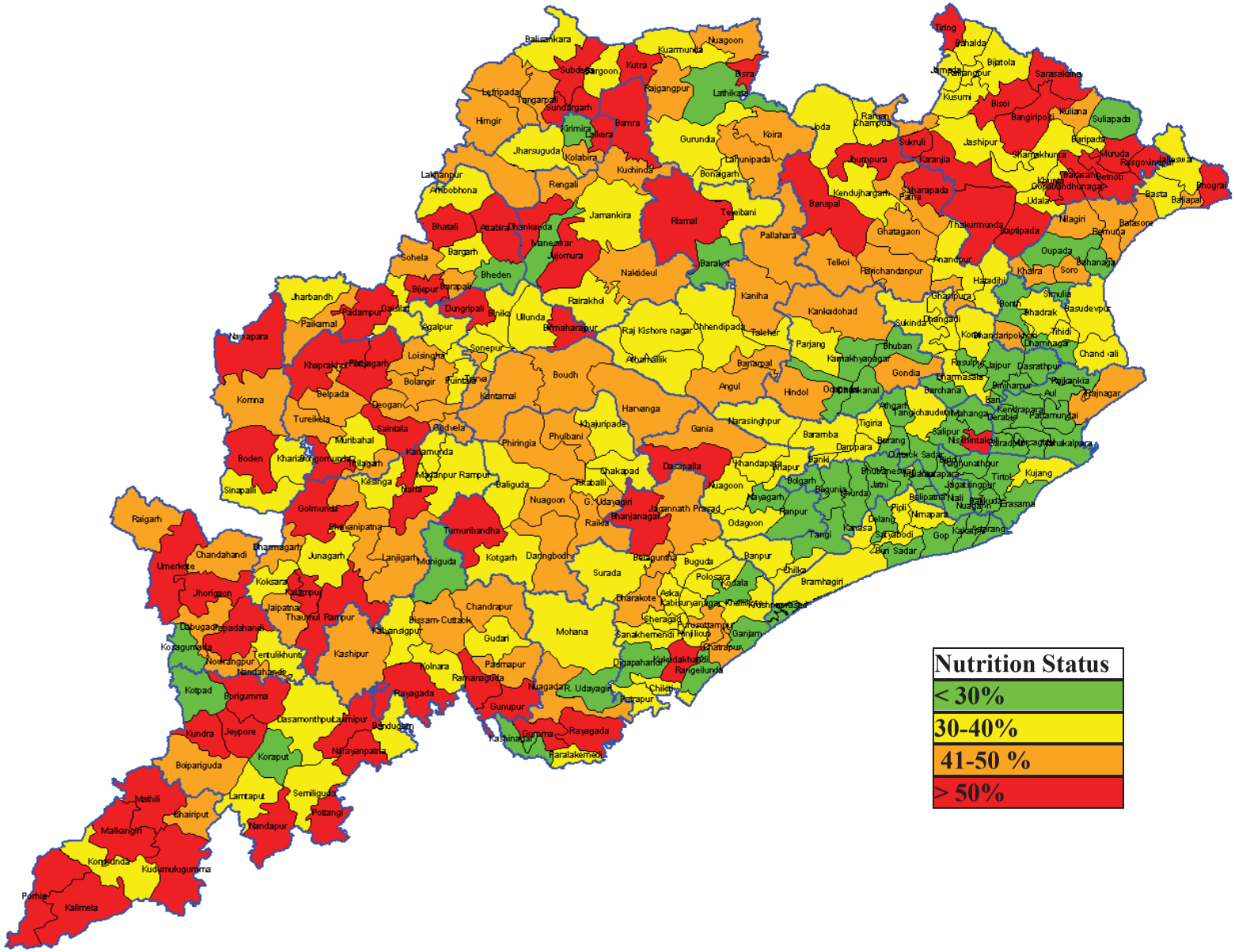
Table 3.9: Nutritional Status (Weight for Age) of 0-59 months Children		
Percent of children underweight (-2SD) and severely underweight (-3SD) by their background characteristics (CCM- Consolidated)		
Characteristics	**Below -2 SD (Underweight)**	**Below -3SD (Severely Underweight**
	%	**%**
Sex of the child		
Boys	39.3	13.1
Girls	39	13.3
Caste of the child		
Scheduled caste	39.7	13.7
Scheduled Tribe	48.9	17.7
OBC	36	11.5
Other castes	28.6	8.5
Education of the mother		
Illiterate	47.6	18.6
Up to Primary	46.2	15.8
Middle	42	14.2
High school	35.8	10.2
Higher secondary and above	24	6.9
Wealth Index		
Lowest	47.3	17.3
Second	41.4	14.3
Middle	34	10.1
Fourth	27.4	7.5
Highest	20.8	5.5
Type of district		
KBK districts	44.5	15.3
Non KBK districts	36.7	12.2

The nutrition status of the children across the districts and blocks presented in Map 7 and Map 8 respectively shows that the districts and blocks having less than 30 percent of the under weight children were mostly from the coastal and better districts in the state. On the other hand the districts and blocks having more than 40 percent of the underweight children were primarily from the back ward districts in the state.

Map 7: Percentage of children (0-59months) under-weight (weight for age) across different districts (CCM- Consolidate)



Map 8: Percentage of children (0-59months) under-weight (weight for age) across different blocks



3.4 CORRELATION ANALYSIS

In this section an attempt has been made to study the correlation between the dependent variable nutrition status of children 6-23 months and a set of independent variables. The dependent and the independent variables used for the correlation analysis are given below.

Dependent Variable

1. Nutrition status of the children – This is a quantitative variable expressed in terms of the actual Z scores of each child determined on the basis of weight for age analysis

Independent variables

1. Age of mother – It is a quantitative variable and takes actual age of the mother

2. No of living children- This is also a quantitative variable and takes actual number of living children

3. Age of Child - It is a quantitative variable and takes actual age of the child

4. Births per married years - This is also a quantitative variable and takes the number per married year of the mother

5. Asset score – This is a quantitative variable and takes the actual asset score worked out for each household for calculation of wealth index

6. Caste - SC ST – This is a dichotomous variable. If the caste of the head of the household was SC/ST value 1 was assigned else 0 was given

7. Mother education - This is a dichotomous variable. If the mother is illiterate value 1 was assigned else 0 was given

8. Number of days for which SNP received – This is a quantitative variable and takes the actual number days for which SNP was provided for the child in last one month

9. Birth weight of child- This is also a quantitative variable and takes actual birth weight of the child

10. Number of times child weighed in last 3 months – This is also a quantitative variable

11. SNP Duration – This is a quantitative variable and takes the duration for which the SNP was received for the child

12. Family size - This is also a quantitative variable and takes the actual number of members in the household

13. Duration of Solid Food – This is a quantitative variable and takes the values of the duration for which the solid food was received by the child

14. Exclusive Breastfeeding- This is a quantitative variable and takes the values of the duration for which exclusive breast feeding was received by the child

Results of correlation analysis

The results of the correlation analysis have been presented in the following table.

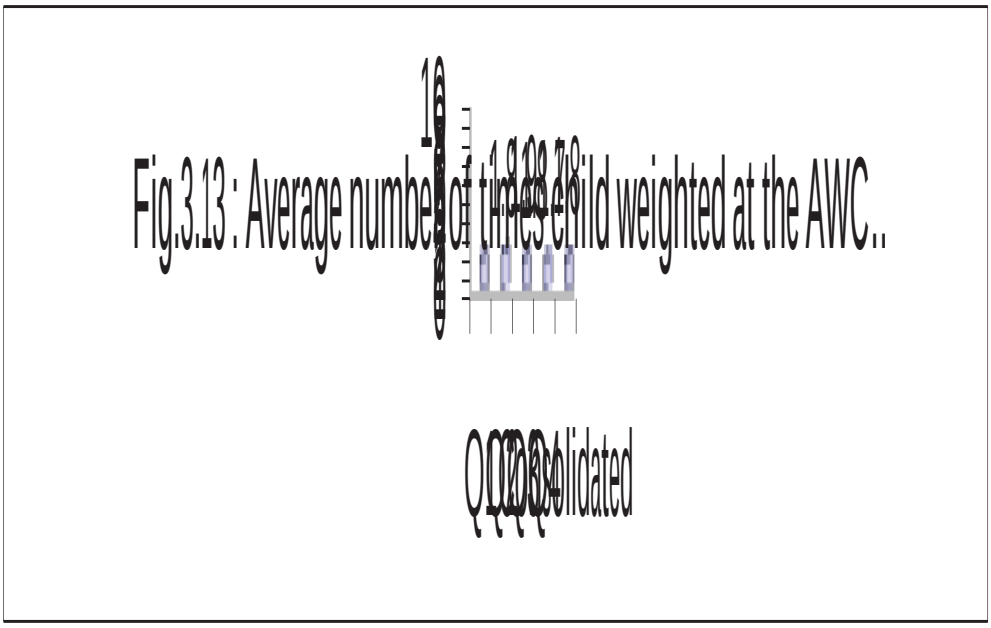
Table 3.10 : Results of correlation analysis

Name of the independent variable	Correlation co-efficient with dependent variable				Remarks/interpretation
	Q1	Consolidated (Q1 and Q2)	Consolidated (Q1 to Q3)	Consolidated (Q1 to Q4)	
Age of mother	-.075**	-.052**	-.037*	-.035*	In Q1 as well as the consolidated data for Q1 and Q2 the relationship was significant at 1% level. In the consolidated data for Q1 to Q3 and Q1 to Q4 the relationship was significant at 5% level
Number of living children	-.128**	-.087**	-.094**	-.103**	In Q1 as well as the consolidated data for Q1 and Q2 , Q1 to Q3 and Q1 to Q4 the relationship was negative and significant at 1% level
Age of Child	-.065*	-.052**	-.064**	-.073**	In Q1 the relationship was significant at 5% level . In the consolidated data for Q1 and Q2 , Q1 to Q3 and consolidated data for Q1 to Q4 the relationship was negative and significant at 1% level
Births per married years	-.044	-.055**	-.055**	-.063**	The analysis did not show any significant association in Q1. However, in the consolidated data for Q1 to Q2 ,Q1 to Q3 as well as Q1 to Q4 the association is found to be significant at 1% level.
Asset score	.202**	.212**	.214**	.222**	In the Q1 as well as consolidated data for Q1 to Q2 , Q1 to Q3 and Q1 to Q4 the relationship was significant at 1% level
Caste - SC ST	-.072**	-.106**	-.124**	-.144**	In Q1 as well as the consolidated data for Q1 and Q2 , Q1 to Q3 and Q1 to Q4 the relationship was negative but significant at 1% level
Mother education	.123**	.142**	.149**	.164**	In Q1 as well as the consolidated data for Q1 and Q2 , Q1 to Q3 and Q1 to Q4 the relationship was significant at 1% level
Number of days for which SNP received	-.078**	-.031	-.033	-.021	Duration for which SNP was received by the child showed negative and significant association at 1% level in the Q1. The analysis of consolidated data also shows negative association between the duration for which SNP was received and the nutrition status of the child , but this association was not observed to be significant
Birth weight	.159**	.180**	.184**	.193**	The relationship was significant at 1%

of child					level.
Number of times child weighed in last 3 months	-.078**	-.031	-.033	-.021	The relationship was significant at 1% level in Q1. However, in the consolidated data although the direction was negative the association with the dependent variable was not significant..
SNP Duration	-.066*	-.054**	-.068**	-.076**	The relationship was significant at 1% level.
Family size	.005	.021	.028	.026	The family size seems to have no affect on nutrition status of the child.
Duration of Solid Food	-.038	-.049	-.061**	-.075**	The relationship was significant at 1% level in the consolidated data for Q1 to Q3 and Q1 to Q4 although it was not significant in Q1 and consolidated data for Q1 and Q2.
Exclusive Breastfeeding	.039	.014	.003	-.004	In Q1 as well as consolidated data there was no significant association between exclusive breast feeding and nutrition status of the child

3.5 FREQUENCY OF WEIGHING THE CHILD AT THE AWC

One of the important functions of the Anganwadi worker is to take the weight and update the growth chart for each child on a monthly basis. In this context the mothers of 0-6 year's children were asked about the number of times the child was weighted at the AWC in the last three months. The analysis of their responses has been presented in Figure 3.13. The average number of times the child weighted at the AWC worked out to 1.8 which indicates that in a number of cases the weight of the children is not taken by the AWC every month. This indicates the necessity of further strengthening of the growth monitoring activities at the AWCs. The average number of times the child weighted at the AWC did not vary in the four quarters.



3.6 CHILD MORBIDITY

It is more likely that prevalence of diarrhoea, fever and acute respiratory infections (ARI) among young children will have adverse consequences on their nutritional status. The study ascertained the health problems from the sampled children that had suffered from any illness during two weeks preceding the survey. Figure 3.14 shows that 25 percent of the children in the age group of 0-59 months had fallen ill during the reference period of last two weeks. The proportion of the children who had fallen sick was higher in Q1 (26%) and Q4 (26%) than the Q2 (23%) and Q3 (24%).

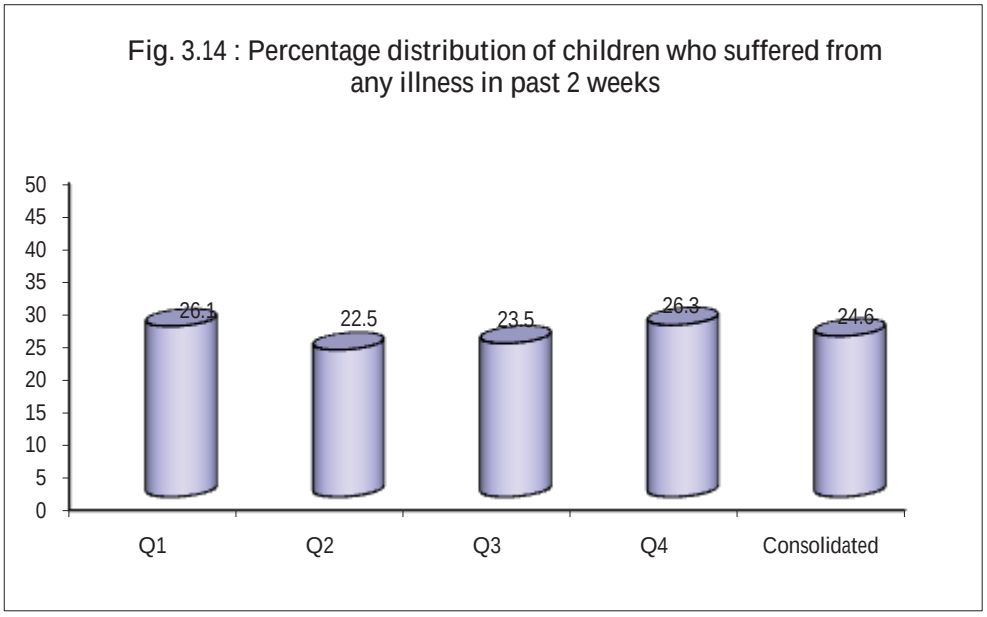


Table 3.11 shows the proportion of children in the age group of 0-59 months who suffered from diarrhea, fever and ARI/Runny nose/Cough/Breathlessness. As the concurrent monitoring study shows around 3 per cent of children in the age group of 0-59 months had suffered from diarrhea. Compared to NFHS this estimate is on a much lower side. Over all 14 percent of the children had suffered from fever and 18 percent reportedly suffered from ARI/Runny nose/Cough/Breathlessness in the past weeks. The proportion of children suffering from fever was higher in Q3 where as the proportion of children suffering from ARI/Runny nose/Cough/Breathlessness was higher in the Q1. It may be noted that the field work for the first quarter was carried out mostly in winter months when the symptoms of ARI is expected to be higher.

Table 3.11: Type of illness in the past 2 weeks

Percent of children in the age group of 0-59 months who suffered from different illness in past 2 weeks

Type of illness	Q1	Q2	Q3	Q4	Consolidated
Diarrhoea	4.2	3.6	3.8	2.8	3.2
Fever	14.9	13,2	18.6	13.5	13.7
ARI/Runny nose/Cough/Breathlessness	21.7	17.0	14.4	19.8	17.6
Total N	**6804**	**6576**	**4922**	**5239**	**23791**

As the following table shows over four-fifth of the children suffering from diarrhea as well as fever in the past two weeks had received treatment. Among the children suffering from ARI/ runny nose/cough/breathlessness nearly three-fourth had received treatment. Analysis by background characteristics shows that across the caste groups the proportion of children receiving treatment for fever as well as ARI/ runny nose/cough/breathlessness was higher for the children belonging to other caste groups. The children whose mothers are illiterates are less likely to receive the treatment for different illness suffered by them. The proportion of children receiving treatment for diarrhea as well as fever did not vary between the KBK and non KBK districts. However, a higher proportion of children in the non KBK districts had received treatment for ARI/ runny nose/cough/breathlessness.

Table 3.12: Treatment sought for the children suffering from different illness in the past two weeks

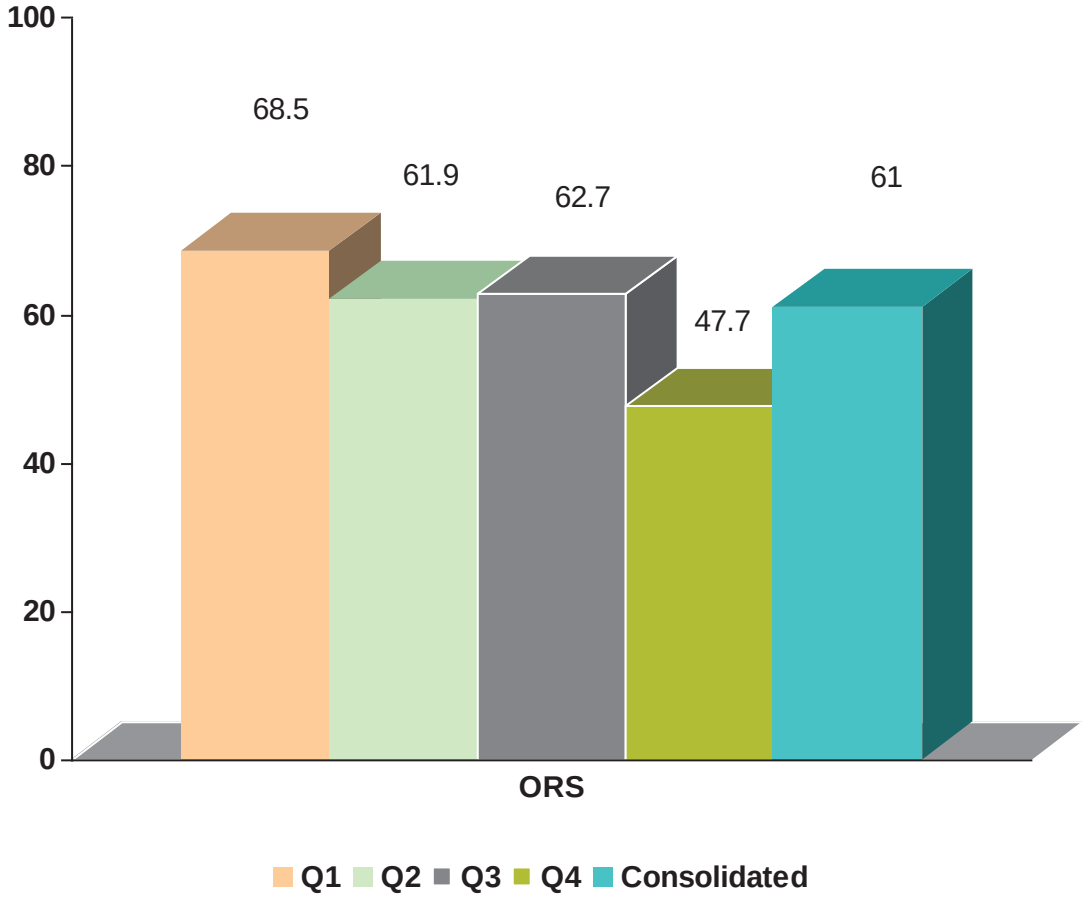
Percent of under five children for whom treatment was sought during the illness in past two weeks by background characteristics (CCM- Consolidated)

Characteristics	% sought treatment for diarrhoea	% sought treatment for fever	% sought treatment for ARI/ Runny nose/Cough/Breathlessness
Caste			
Scheduled caste	83.1	86.7	74.1
Scheduled Tribe	81.9	82.4	60.8
OBC	83.2	87.1	73.1
Other caste	81.7	90.7	79.2
Wealth Quintile			
Lowest	81.4	83.2	64.7
Second	86.2	82.7	63.7
Middle	81.7	86.5	74.5
Fourth	83.5	90.7	74.2

Table 3.12: Treatment sought for the children suffering from different illness in the past two weeks			
Percent of under five children for whom treatment was sought during the illness in past two weeks by background characteristics (CCM- Consolidated)			
Characteristics	**% sought treatment for diarrhoea**	**% sought treatment for fever**	**% sought treatment for ARI/ Runny nose/Cough/Breathlessness**
Highest	81.0	88.2	76.6
Education of the women			
Illiterate	79.5	82.4	66.0
Up to primary	81.9	85.5	69.9
Middle	87.8	89.0	74.1
High school	74.2	89.7	76.4
Higher secondary and above	89.1	94.4	77.3
Type of district			
KBK districts	88.9	87.3	75.7
Non KBK districts	81.4	86.4	71.0
Total	**83.5**	86.7	**71.7**

As deaths from diarrhoea are a significant proportion of all child deaths, the Government of India has launched the Oral Rehydration Therapy Programme as one of its priority activities for child survival. One major goal of this programme is to increase awareness among mothers and communities about the causes and treatment of diarrhoea. Oral rehydration salt (ORS) packets are made widely available and mothers are taught how to use them. All the mothers who reported episodes of diarrhea in the past two weeks before the survey were asked about the use of ORS or ORT during diarrhoeal episodes. Figure 3.15 shows the percentages of children with diarrhoea in the past two weeks who received ORS and ORT. Sixty one percent of children age 0-59 months who suffered from diarrhoea during the two weeks preceding the survey was treated with a solution made from ORS packets. Use of ORS was relatively higher in the Q1 compared to Q2 to Q4.

Figure 3.15: Percentage of children given ORS during diarrhoeal episodes



The results presented in this chapter shows that in the recent past, that there has been a considerable improvement in initiation of breast feeding within one hour, colostrums feeding, exclusive breast feeding for 6 months, immunization coverage of children, provision of supplementary food for the children at the AWC and use of ORS .However, the malnutrition especially among the children belonging to vulnerable communities remains high and continue to be a challenge. There has not been any decline in the proportion of severely under weight children in the age group of 5-59 months since NFHS 3.

CHAPTER IV: MATERNAL HEALTH SERVICES

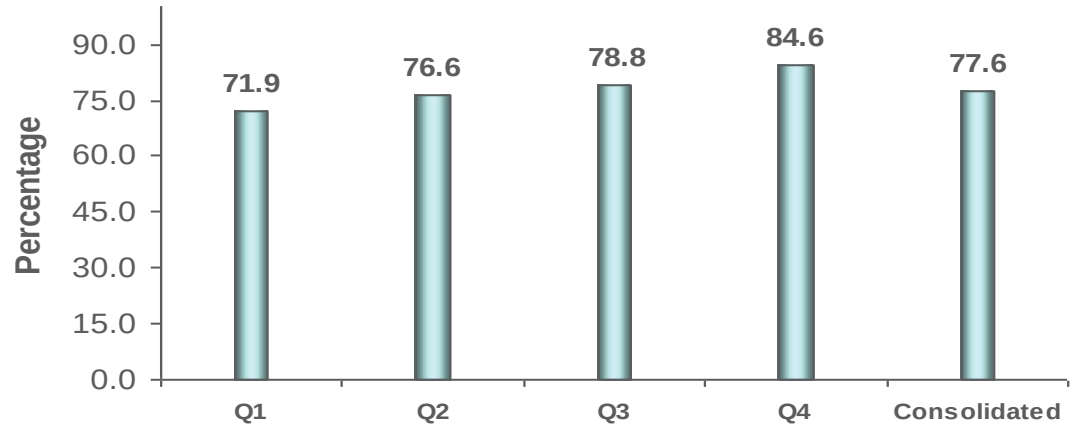
Women's health and the care women provide to children considerably influence child health and child survival. Looking at the Maternal and Child Health indicators in the state of Odisha, betterment of health and nutrition status of women is critical in preventing malnutrition and child deaths. In this context, the ICDS programme aims to reach pregnant and lactating women with necessary information and services to enhance their capacity to take care for themselves and for their children. In order to reduce the incidence of low birth weight babies, promote maternal health and restrict the incidence of maternal and neonatal morbidity and mortality emphasis is given, under the health as well as ICDS Programmes, to provide proper antenatal care, intra natal care, post natal care and referral services. To understand the extent of utilization of these services, the required information from lactating women and mothers of 7-36 months children was collected during the concurrent monitoring. This chapter presents the survey findings relating to utilization of antenatal and natal care services.

4.1 ANTENATAL CARE SERVICES

The importance of reaching women during pregnancy is increasingly recognized as a critical factor to improve maternal health, birth weight, birth outcome and neonatal health. ICDS programme aims to reach the pregnant women with health counseling and information as well as supplementary food with a goal to influence the health practices that prevent child malnutrition and deaths. The Anganwadi Centers in collaboration with health sub-centers are expected to play an important role in promoting antenatal care services including ANC check ups, use of Iron Folic Acid (IFA), administration of Tetanus Toxoid (TT) injections, provision of consumption of supplementary food and referral of complicated pregnancy cases.

In order to assess the extent of utilization of antenatal care services all the mothers of 0-36 month's children were asked a series of questions relating to ante natal check ups, consumption of IFA tablet and administration TT during the pregnancy. The results are presented in the following sections. The concurrent monitoring study shows that majority (78%) of the mothers of 0-36 months children had received at least three ANC check up which is recommended under the ICDS as well as health programmes (Figure 4.1). The corresponding percentages in NFHS 3 and DLHS 3 were 59 and 52 percent respectively. The receipt of 3 or more ANC was higher in Q43 (85%) than the Q1 (72%) , Q2 (77%) and Q3 (79%).

Fig. 4.1: Percent of mothers of 0 to 36 months children who received 3 or more ANC check ups during last pregnancy



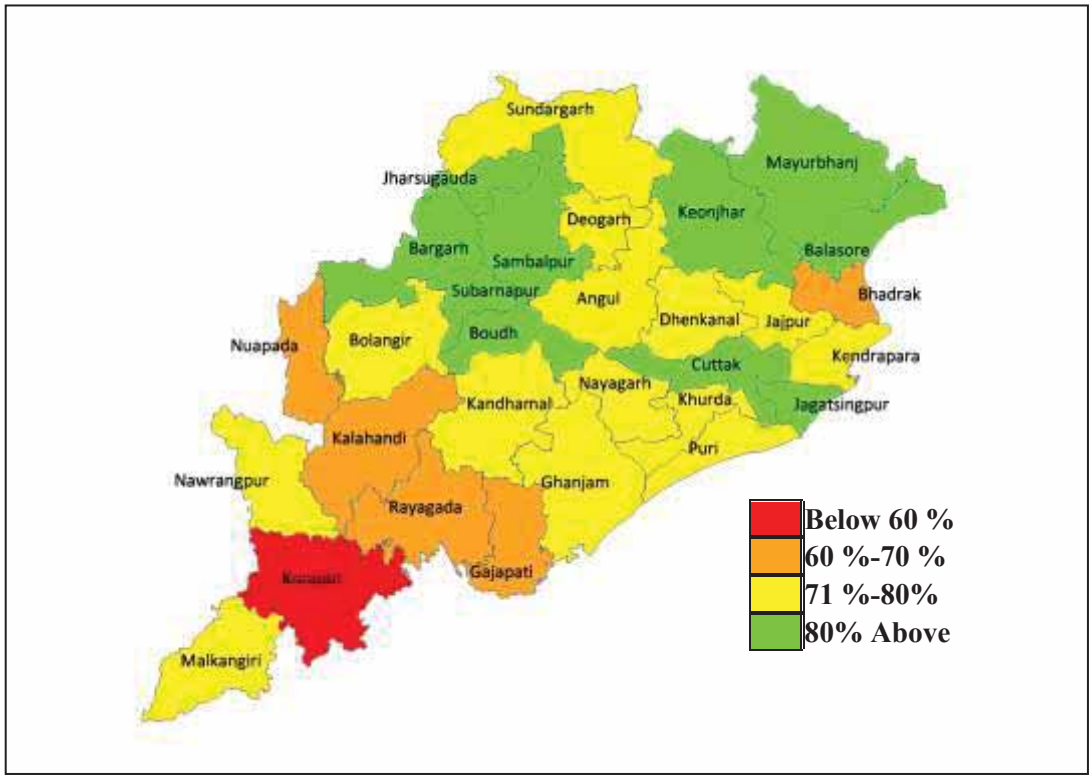
The analysis on receipt of 3 or more ANC by background characteristics of the mother of 0-36 month's children has been presented in Table 4.1. Almost equal proportion of mothers of 0-6 months as well as 6-36 months children reported receipt of three or more ANC check ups. The proportion of mothers receiving at least three ANC check ups was higher among the mothers belonging to highest wealth quintiles and mothers having higher level of education (high school and above). The corresponding percentage varied from 74 percent to 83 percent across the caste groups. The mothers from the non KBK districts (81%) are much more likely to receive three or more ANC check ups than those from the KBK districts (71%).

Table 4.1:Percentage of women who received three or more ANC by background characteristics (Mothers of 0-36 months children)

Characteristics	**Percent**
Category of mother	
Mothers of 0-6 months children	76.4
Mothers of 6-36 months children	75.4
Caste	
Scheduled caste	75.9
Scheduled Tribe	74.1
OBC	82.9
Other caste	73.8
Wealth Quintile	
Lowest	66.9
Second	73.9
Middle	76.7
Fourth	82.4
Highest	87.6
Education of the women	
Illiterate	66.8
Upto primary	78.4
Middle	84.7
High school	84.1
Higher secondary and above	90.4
Type of district	
KBK districts	70.8
Non KBK districts	80.8
Total	**77.6**
Total N	**16941**

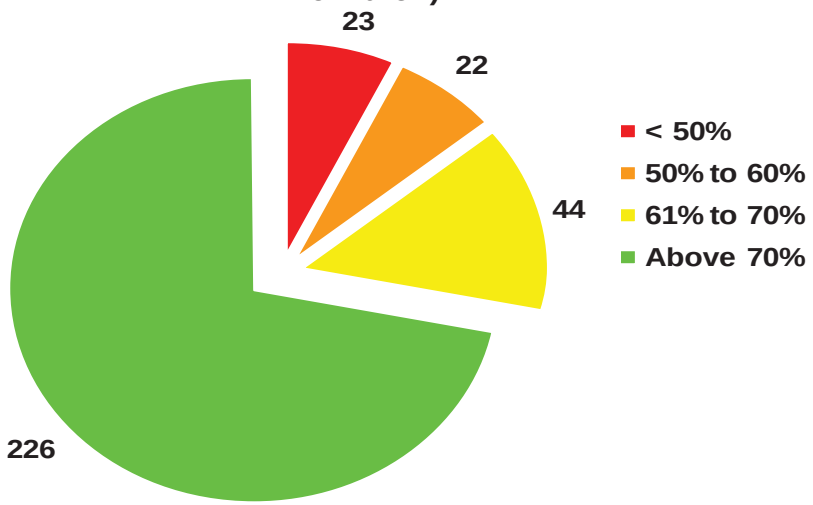
The following map shows that the receipt of 3 or more ANC was lower (less than 60 percent) in Koraput. More than 80 percent of the mothers in Mayurbhanj, Keonjhar, Balasore, Cuttack, Subarnapurl, Sambalpur, Jharsuguda, , Boudh , Bargarh and Jagatsinghpur reported receipt of 3 or more ANCs.

Map 9: Percentage of mothers of 0-36 month's children who received 3 or more ANC during last pregnancy (CCM- Consolidate)



As the following figure shows in 226 out of the 314 blocks over 70 percent of the mothers had received 3 or more ANC check ups and in less than 10 percent of the blocks the proportion of mothers receiving 3 or more ANC check ups was less than 50 percent.

Figure 4.2; Distribution of blocks according to percentage of women who received 3 or more ANC during last pregnancy (Mothers of 0-36 Months children)



The provision of IFA tablets to women during pregnancy forms an important component of the health as well as ICDS programmes. It is recommended that pregnant women should be provided and encouraged to consume 100 or more IFA tablets or 3 bottles of syrup to prevent nutritional anemia during pregnancy. The concurrent monitoring study shows that 84 percent mothers of 0-36 month's children received and 57 percent consumed at least 100 IFA tablets/3 bottles of syrup respectively (Table 4.2). There has been a substantial improvement in the consumption of at least 100 IFA tablets since NFHS 3 (33 percent) as well as DLHS 3 (32 percent). In CES 2009 46 percent of the women in rural areas reported consumption of 100 or more IFA tablets during their last pregnancy. The percentage of women reporting receipt as well as consumption of 100 or more IFA tablets was more similar in different quarters.

Fig. 4.3: Receipt and Consumption of at least 100 IFA tablets/3 bottles of syrup during last pregnancy among the mothers of 0 to 36 months children

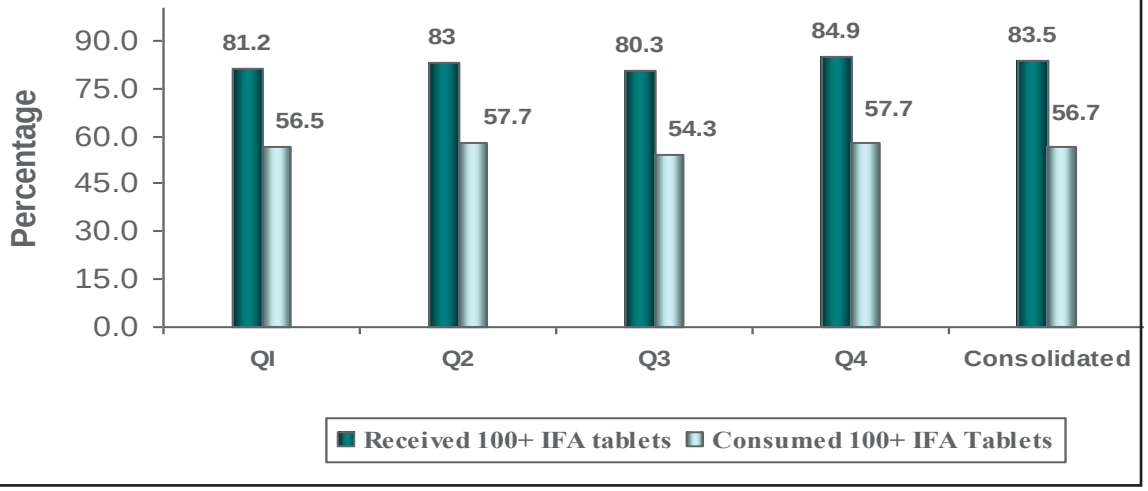


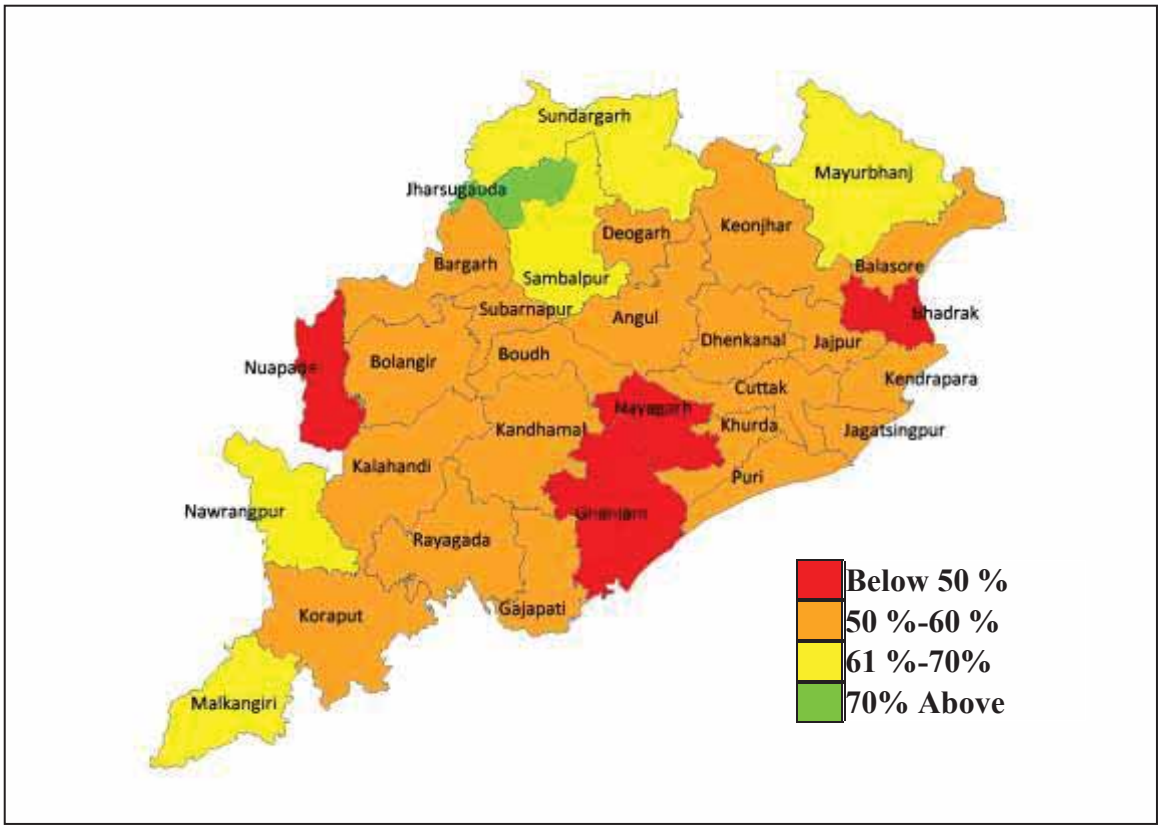
Table 4.2 shows that the consumption of 100 or more IFA tablets was higher among the mothers of 0-6 months children , scheduled tribe women, women belonging to highest wealth quintile and women having high school and above level of education. The consumption of 100 and above IFA tablets was higher among the mothers in KBK districts compared to the non KBK districts.

Table 4.2*:* Percentage of women who consumed 100 or more IFA tablets by background characteristics (Mothers of 0-36 months children)	
Characteristics	**% consumed 100 or more IFA tablets**
Category of mother	
Mothers of 0-6 months children	59.3
Mothers of 6-36 months children	54.2
Caste	
Scheduled caste	54.2
Scheduled Tribe	61.2
OBC	53.1
Other caste	59.7
Wealth Quintile	
Lowest	54.2

Table 4.2*:* Percentage of women who consumed 100 or more IFA tablets by background characteristics (Mothers of 0-36 months children)	
Characteristics	**% consumed 100 or more IFA tablets**
Second	57.2
Middle	54.8
Fourth	55.1
Highest	61.7
Education of the women	
Illiterate	55.6
Up to primary	55.3
Middle	60.1
High school	64.1
Higher secondary and above	55.3
Type of district	
KBK districts	58.1
Non KBK districts	56.0
Total	**56.7**

Map 10: Percentage of women consumed 100 or more IFA tablets during last pregnancy (Mothers of 0-36 month's children) across districts (CCM-Consolidated)

Over 70 percent of the mothers in Jharsuguda reported consumption 100 or more IFA tablets. The consumption of 100 IFA tablets was reported by less than 50 percent of the women in Nuapada, Ganjam, Nayagarh and Bhadrak .



The NRHM implemented through a network of health centers in rural areas emphasize on administration of two doses of TT to women during pregnancy. The mothers of 0-36 month's children contacted for the concurrent monitoring study were asked whether they were given an injection in the arm to prevent them and their child from tetanus. Figure 4.4 shows that almost all mothers of 0-36 months children (97 %) had received at least 2 doses of TT during their last pregnancy. As per NFHS 3, DLHS 3 and CES 2009 the coverage of two or more doses of TT among the women during pregnancy was 83, 77 and 95 percent respectively. The coverage of 2 or more doses of TT was more or less similar in the four quarters.

The coverage of at least two doses of TT did not vary much by category of the mother, caste, wealth index and education of the mother. The coverage of two or more doses of TT was marginally higher in the non KBK (98%) than the KBK districts (96%)

Fig. 4.4 : Percentage of mothers of 0-36 months children who received at least two doses of TT during their last pregnancy

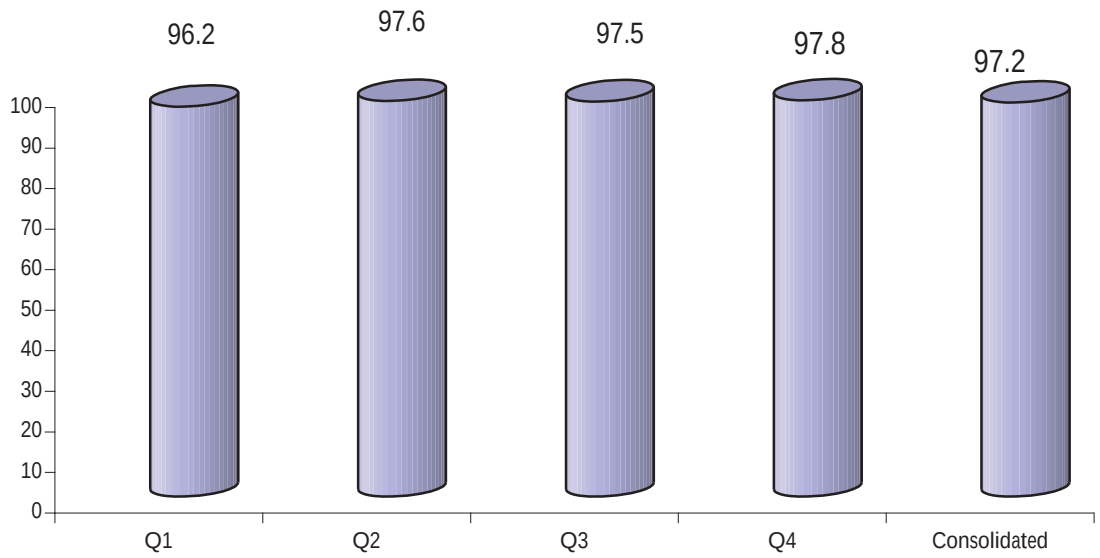
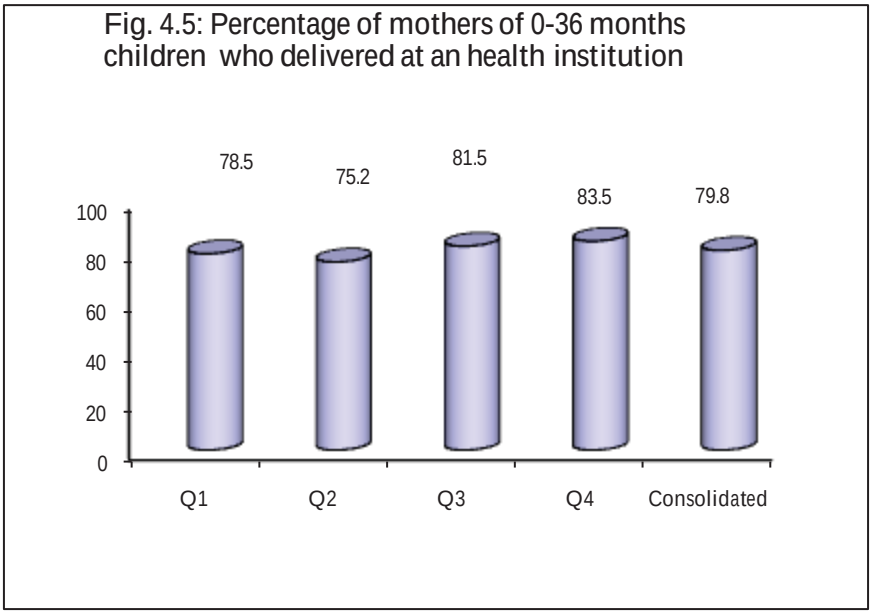


Table 4.3 :Percentage of women who were administered two or more doses of TT by background characteristics (CCM-Consolidated)	
Characteristics	**Percent**
Category of mother	
Mothers of 0-6 months children	97.2
Mothers of 6-36 months children	96.3
Caste	

Table 4.3 :Percentage of women who were administered two or more doses of TT by background characteristics (CCM-Consolidated)	
Characteristics	**Percent**
Scheduled caste	97.0
Scheduled Tribe	96.3
OBC	97.9
Other caste	97.7
Wealth Quintile	
Lowest	95.9
Second	96.2
Middle	97.3
Fourth	98.4
Highest	98.2
Education of the women	
Illiterate	95.6
Up to primary	97.5
Middle	98.2
High school	98.2
Higher secondary and above	98.8
Type of district	
KBK districts	96.1
Non KBK districts	97.8
Total	**97.2**
Total N	**16941**

4.2 NATAL CARE SERVICES

An important component of the safe motherhood initiatives taken under various programmes/ schemes is to encourage mothers to undergo institutional deliveries. This component has been further strengthened under the JSY scheme. All the mothers of 0-36 month's children contacted for the concurrent monitoring study were asked to mention the place where had their last birth taken place. It is quite encouraging to note that nearly four-fifth of the mothers of 0-36 month's children had delivered the last child at any health facility (Figure 4.5). There has been a manifold increase in the proportion of institutional deliveries since the NFHS 3 (31 percent) as well as DLHS 3 (40 percent). The corresponding percentage in CES 2009 was 74 percent. Such an increasing trend in the institutional deliveries is being observed after the implementation of the JSY scheme. The proportion of institutional deliveries was marginally higher in the Q3 and Q4 compared to Q1 and Q2.



The following figure presents the percentage of deliveries that took place at Public and Private sector health facilities. Of the total 79.8 percent deliveries that had taken place in health intuitions 74.3 percent were conducted at public sector health facilities and only 5.4 percent had taken place at the private sector health facilities. The analysis of institutional deliverables by background characteristics of the mothers has been presented in Table 4.4 .A higher proportion of mothers of 0-6 month's children compared to mothers of 6-36 months children had delivered the last child at a health facility. The mothers belonging to STs as well as lowest and second lowest wealth quintiles are relatively less likely to deliver at a health institution. Further, the proportion of institutional deliveries was lower in case of the mothers who were illiterates. The proportion of institutional deliverables was much higher in the non KBK districts (87%) than the KBK districts (80%). As discussed earlier over all around 5 percent of the women had reported deliveries at private sector health facilities. The analysis of their background characteristics shows that the women from highest and higher wealth quintiles, women having higher secondary and above education, women from Non-KBK districts and women from OBC and other castes had mostly gone for deliveries at the private health facilities.

Fig. 4.6: Percentage of deliveries conducted at public and private sector health facilities

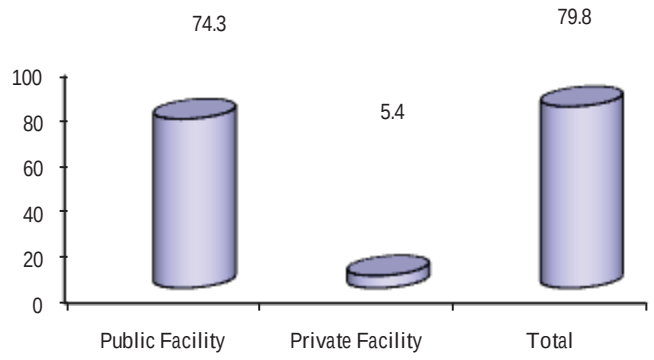
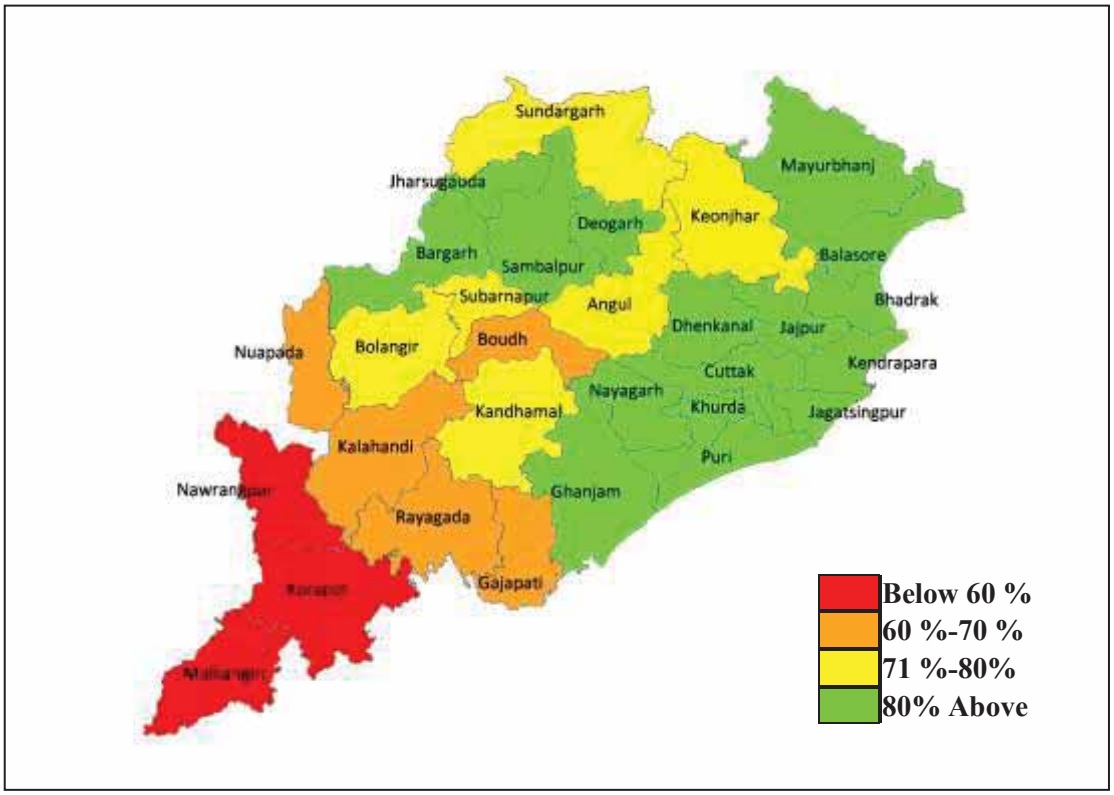


Table4.4 :Percentage of women who delivered at any health facility by background characteristics (CCM-Consolidated)				
Characteristics	**Public Facilty**	**Private Facilty**	**Any Health Facility**	**Total N**
Category of Mother				
Mothers of 0-6 months children	76.9	5.6	82.5	8200
Mothers of 6 months to 3 years children	71.9	5.3	77.2	8741
Caste				
Scheduled caste	78.7	3.6	82.4	3217
Scheduled Tribe	65.9	1.5	67.3	4930
OBC	78.6	8.1	86.6	6197
Other caste	74.8	9.0	83.8	2597
Wealth Index				
Lowest	63.4	1.0	64.3	3449
Second	68.8	1.3	70.1	3216
Middle	78.5	2.3	80.8	3294
Fourth	83.2	5.5	88.6	3389
Highest	77.6	16.3	93.9	3593
Education of Mother				
Illiterate	61.8	1.2	63.0	5471
Upto primary	79.2	2.8	82.0	4399
Middle	82.8	6.7	89.5	4456
High school	80.8	12.4	93.2	1448
Higher secondary and above	74.6	21.6	96.1	1167
Type of District				
KBK	62.9	1.9	64.8	5377
Non KBK	79.6	7.1	86.7	11564
Total	**74.3**	**5.4**	**79.8**	**16941**

Across the districts the proportion of institutional deliveries was lower in the districts of Koraput, Malkanagi and Nawarangpur (Map 11). The proportion of women reporting deliveries at the private sector health facilities was relatively higher (10 to 13 percent) in the districts of Cuttack, Jharsuguda, Kendrapara, Khurda, Jagatsinghpur and Angul. In the districts of Koraput , Nawrangpur, Malkanagiri, Rayagada, Kandhamal, Gajapati and Boudh less than 2 percent of the deliveries were conducted at the private health facilities.

Map11: Percentage of women delivered at a health institution (Mothers of 0-36 month's children) by districts (CCM-Consolidated)



The following figure shows that in 245 out of the 314 blocks covered in the first three quarters over 80 percent of the mothers had delivered the last child in a health institution.

Figure 4.7; Distribution of blocks according to percentage of institutional deliveries (Mothers of 0-36 Months children)

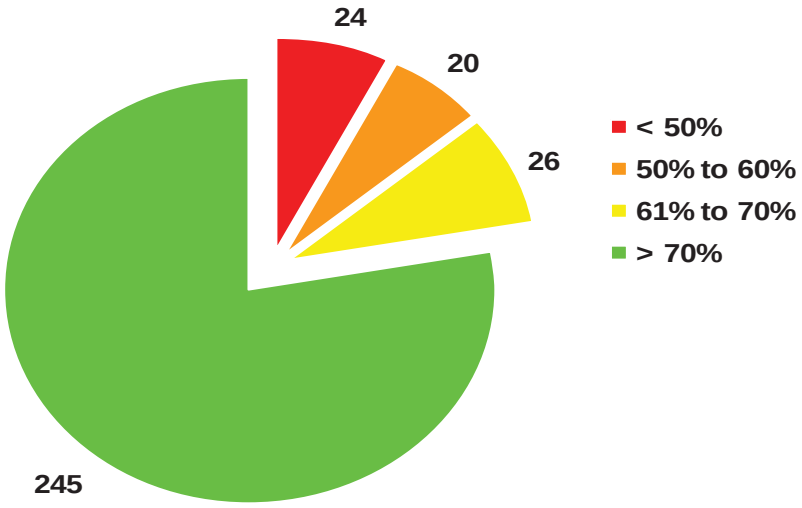


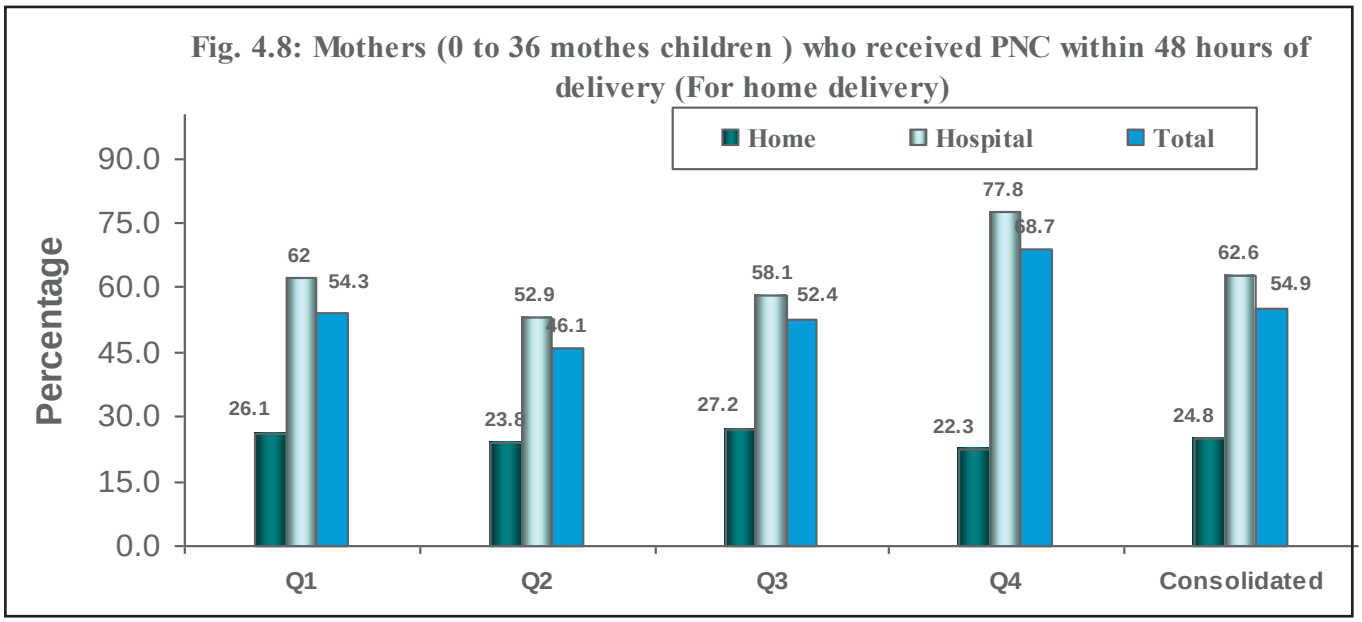
Table 4.5 Comparison of Ante-natal and Natal Care Services in CCM with other available sources

Services	CCM Consolidated (Q1 to Q3)	NFHS 3*	DLHS 3 *	CES 2009*
Atleast 3 ANC check ups	77.6	58.0	52.0	75.2
Consumed at least 100 IFA tablets/3 bottles of syrup	56.7	32.5	47.7	45.5
Administered at least 2 doses of TT	97.2	82.3	77.3	95.2
Delivered at any health facility	79.8	34.6	40.4	74.4

*The figures are for rural areas of Odisha

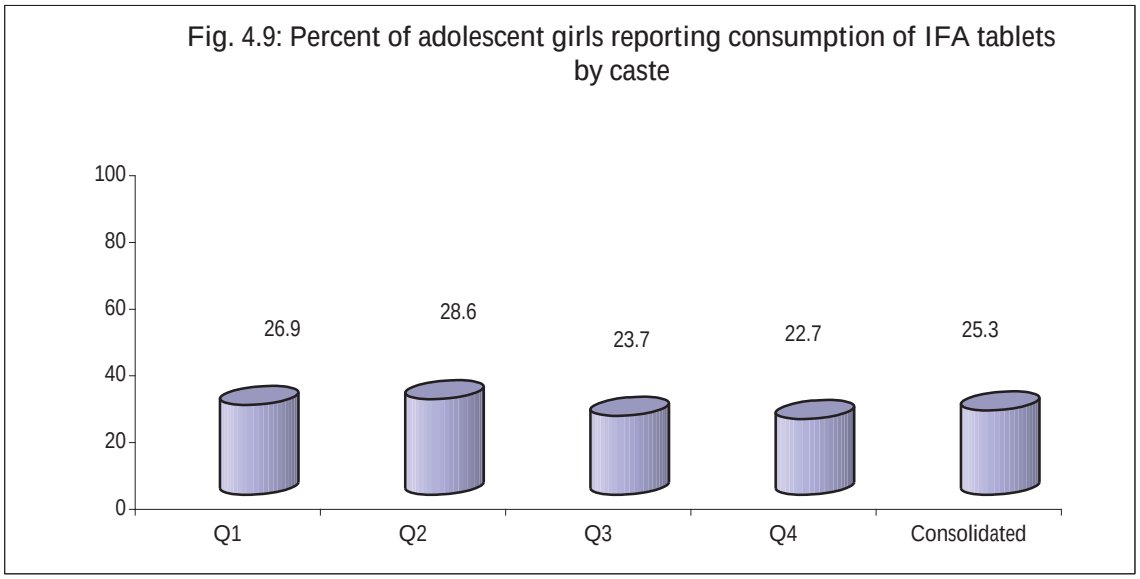
4.3 POST NATAL CARE SERVICES

A large proportion of maternal and neonatal deaths occur during the 48 hours after delivery. Hence safe motherhood programmes have increasingly emphasized the importance of postnatal care, recommending that all women receive a check up of their health within two days of delivery. It is most important to have the first postnatal check-up within a few hours of delivery. To assess the extent of postnatal care check-ups, the women who had delivered at home were asked whether they received a health check after the delivery and the timing of the first check up. The analysis presented in Figure 4.8 shows that around three-fourth of the mothers of 0-36 months children who had delivered the child at home did not receive any postnatal check-up within the critical first two days after delivery. The findings are almost similar in all the four quarters. Among the women who had delivered at a health institution 63 percent reported post natal check ups within first 48 hours of delivery.



4.4 CONSUMPTION OF IFA TABLETS AMONG ADOLESCENT GIRLS

The adolescent girls (unmarried girls in the age group of 11-19 years) act as pillars to future productivity and child rearing. However, their health and nutritional well-being is generally neglected. The ICDS programme aims to promote IFA supplementation among the adolescent girls to tackle the problem of anemia among them. In this context all the adolescent girls interviewed during the concurrent monitoring study were asked about the consumption of IFA tablets. As the Figure 4.9 shows, 25 percent of the adolescent girls reported consumption of IFA tablets at least once in a week. The consumption of IFA tablets was reported by a relatively higher proportion of adolescent girls covered in Q1 and Q2 compared to Q3 and Q4.



The results presented in this chapter shows a remarkable progress in the coverage of ANC check ups, consumption 100 or more IFA tablets , administration of two doses of TT in general and intuitional deliveries in particular. However, among the women who had delivered at home, a majority did not receive any post natal check up within first 48 hours of delivery. There is also enough scope for promoting consumption of IFA tablets among the adolescent girls.

Chapter V: WATER AND SANITATION

The Government of Odisha has been making concerted efforts for promoting access to safe drinking water as well as improved sanitation facilities to the rural population. The common objective is to reduce the incidence of water and sanitation related diseases, by advancing universal access to protected and sustainable drinking water, the use of sanitary toilets and safe personal, home and community hygiene behavior. The Swajaldhara scheme of the GOI provides funding and technical support to the states to improve safe water and sanitation programmes through a demand base approach including testing of improved water sources. The Gaon Kalyan Samitis are also expected to play an important role in promoting the use of safe drinking water and environmental sanitation at the village level. In the concurrent monitoring study an attempt was made to assess the extent of accessibility of the rural population to improved sources of water and improved sanitation facilities and the findings are discussed in the present chapter. The chapter also covers the issues relating to the activities carried out by the GKS in improving the drinking water sources in the village.

5.1 USE OF IMPROVED SOURCES OF DRINKING WATER

The households were asked which water source was mainly used for drinking water. The options included different improved or unimproved water sources.

As per WHO / UNICEF's Joint Monitoring Programme (JMP) definition, the improved water sources included piped water supply (provided at household/plot/yard or community level), tube well or bore well (capped with hand pumps), protected dug wells, protected spring and rainwater. Unimproved water sources included unprotected (open) wells and springs, water tankers, surface water sources, carts providing water in cans or jars and bottled water.

Of the basket of options, the available improved water source in the survey villages were:

- Piped water supply provided at household/plot/yard level through individual connections
- Piped water provided at community level through public taps / standposts
- Public hand pumps on deep tube well or bore well
- Individually owned hand pumps over bore wells, and
- Covered or protected dug wells

Use of safe and improved water sources by households

At an overall level as per Q4 and consolidated Q1, Q2, Q3 and Q4 data, it is seen that the majority of the households reported using improved water sources, and although Q4 showed an increase in the proportion of households using improved water sources as compared to Q3, but the estimate for Q2 and Q4 are similar. As per Q4 estimate, 84.3 percent of the households reported using improved or potable water sources (this figure for Q2 was 84.6 percent) and at the consolidated level is 83.2 percent. The estimates for Q1 (81.9%) and Q3 (81.9%) are comparatively lower.

In order to validate the primary survey findings, we may take a look at available recent secondary information on access to improved water sources for drinking water. *As per NFHS 3 data, 77.3 percent households use improved of drinking water source. As per DLHS 3 data, this proportion is 74.8 percent, and as per Coverage Immunization Survey 2009 (UNICEF), this proportion is 81.9 percent.* The Q1 and Q3 count are closer to the UNICEF survey, but is definitely higher than the NFHS and DLHS surveys.

The water source which is reportedly most widely used is the public handpump (58.7% households have reported using this source as per the consolidated count). The public handpump is was found to be the major water source in case of all 4 quarters, but the proportion of households using this source has been found to vary – 54 percent in Q1, 60.6 percent in Q2, 58.7 percent in Q3 and 62.2 percent in Q4. The public handpump is generally considered a safe water source, as it taps water from the second or in cases the third aquifer, which is low on contamination risk. The dependence on the source is expected to vary in different villages/areas, as this in turn depends on whether the public handpumps are provided in combination with piped water supply, or are provided as the sole safe water source by the government. In case of the former, the dependence on the public handpumps would be somewhat lower.

The second most widely used water source is the public tap (attached to piped water supply). The public tap is considered a safe or improved water source as per JMP definition, as the water source is either treated surface water, or it is ground water, which is supposed to be chlorinated before supply. However, the proportion of households reporting the usage of public tap is less than a fourth of the households who report using the public handpump. At the consolidated level, it is reported that 10.9 percent of the households use the public tap, but the estimates are not the same – especially for the first and last quarter. The dependence on the public tap is again dependent on the availability of piped water supply in the surveyed villages, and as is known, piped water supply is much less ubiquitously distributed than the public handpump. Moreover, the piped water supply is subject to seasonal variations due to the quantity of water available, availability of electricity, and maintenance of pipelines (which get affected during the rainy season, if they are in the form of disrepair or poor maintenance, with resulting leakages/rusting, etc). If households face adverse supply condition for some days, they often switch to public handpumps, which are available in a majority of the habitations. Thus, the estimated proportion of households using the public tap in the different quarters are – 13.6 percent in Q1, 10.3 percent in Q2, 10.9 percent in Q3 and 8.3 percent in Q4.

Use of the other improved water sources are low – at the combined level this is:

- 8 percent households for private handpumps in residences or plots. Use of the private shallow bore handpumps have been reported by 8.5 percent households in Q1, 6.4 percent households in Q2, 8.1 percent households in Q3 and 9.4 percent households I Q4.
- 4.1 percent households with tap water supply connections in residence or yard/plots. Use of tap connections has seen a sharp decrease from Q1 (4.7%) and Q2 (5.8%) to the last 2 quarters (2.7% in Q3 and 2.5% in Q5).
- 1.5 percent households reported using covered wells in residence/plot/yard. There has been a small increase in the households using covered wells from Q1 (1.1%) to Q4 (1.9%), while this was 1.5 percent for both Q2 and Q3.

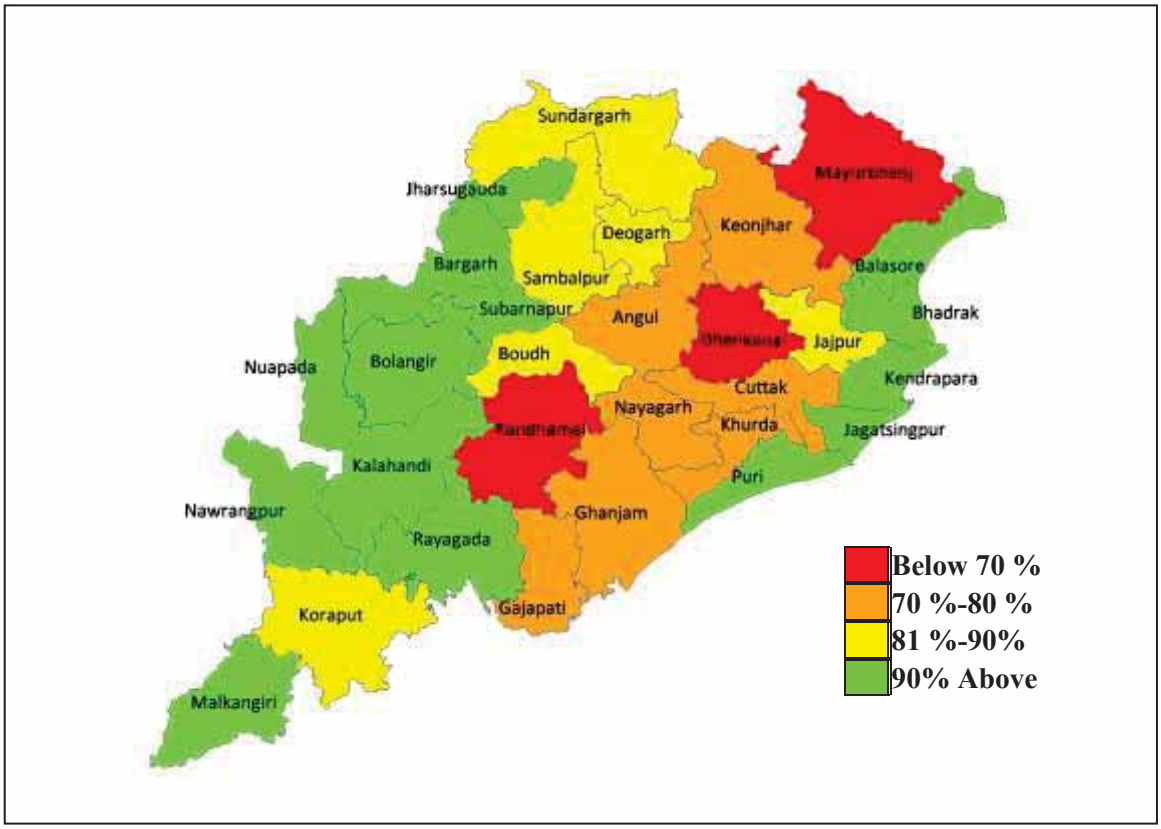
Table 5.1:Main source of drinking water for the household

Percentage distribution of the households by main drinking water source

Type of water sources	Q1	Q2	Q3	Q4	Consolidated
Piped water in residence/yard/plot	4.7	5.8	2.7	2.5	4.1
Public tap	13.6	10.3	10.9	8.3	10.9
Hand pump in residence/yard/plot	8.5	6.4	8.1	9.4	8.0
Public Hand pump	54.0	60.6	58.7	62.2	58.7
Covered well in residence/yard/plot	1.1	1.5	1.5	1.9	1.5

Table 5.1:Main source of drinking water for the household					
Percentage distribution of the households by main drinking water source					
Type of water sources	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
Open well in residence/yard/plot	5.5	3.8	4.9	5.4	4.9
Public well	10.8	9.7	10.2	8.1	9.8
Other	1.9	2	2.9	2.2	2.2
Total N	**11826**	**11924**	**8586**	**9124**	**41460**

Map: 12- Percent of household using improved source of water



The above map shows the distribution of districts based on their access to improved drinking water sources. Although, across the quarters, there has been some movements of districts across the categories, it is seen that the Kandhamal, Dhenkanal and Mayurbhanj still remain at the bottom of the access ladder.

- Districts with more than 90 percent households using improved water sources are Malkangiri, Rayagada, Nawrangpur, Kalahandi, Bolangir, Nuapada, Subarnapur, Bargarh and Jharsuguda in the south-western and western parts of the state; and the coastal districts of Puri, Jagatsinghpur, Kendrapara, Bhadrak, Balasore.
- Districts with 81 to 90 percent households using improved water sources are central and the northern parts of the state and include the districts of Sundergarh, Sambalpur,

Deogarh, the east central district of Jajpur, the central district of Boudh and the southern district of Koraput.

- Districts with 70 to 80 percent households using improved water sources are in the eastern pocket of Nayagarh, Ganjam, Gajapati, Cuttack, Khurda, the central district of Angul and the northern district of Keonjhar.
- Districts with the lowest access (below 70% households) to improved water sources are Kandhamal, Dhenkanal and Mayurbhanj.

Use of unimproved water sources by households

Less than a fifth of the households (16.9%) at the consolidated level has reported the use of non-potable water sources. The estimates of Q1 (18.2%) and Q3 (18%) are similar but show higher proportion of households using non-potable water sources, but there is a dip in this proportion for Q2 (15.5%) and Q4 (15.7%).

- 18.2 percent households report using unimproved water sources as per Q1 survey
- 15.5 percent households report using unimproved water sources as per Q2 survey
- 18 percent households report using unimproved water sources as per Q3 survey
- 15.7 percent households report using unimproved water sources as per Q4 survey
- 16.9 percent households report using unimproved water sources as per Q1, Q2, Q3 and Q4 consolidated figure.

Among the unimproved sources that are used by households for drinking purpose are the open public well (9.8% cumulative) and the individually owned open wells in residence/yard/plot (4.9% cumulative figure) and other water sources (2.2%).

- The estimates for the use of public open wells is similar for Q1 (10.8%) and Q3 (10.2%), while this is lower for Q3 (9.7%) and Q4 (8.1%).
- The estimates for the use of the individually owned open wells is similar for Q1 (5.5%) and Q4 (5.4%), while this is 3.8 percent in Q2 and 4.9 percent in Q3.

Thus, the general trend of drinking water provision amongst the sample households was community level improved water supply infrastructure.

Use of improved water sources by different social groups

There were some differences in the access to improved or safe water sources by different social groups, but there differences in trends noticed in Q1, Q2 and Q3 are less discernible in Q4. The comparatively lower access for Scheduled Tribe households is not so noticeable in the last quarter. At a consolidated level, 87 percent Scheduled Caste households, 80.1 percent Scheduled Tribe households, 83.2 percent Other Backward Caste households and 84 percent other households have reported using improved water sources.

- 87 percent Scheduled Caste households – 88.4 percent in Q1, 87.4 percent in Q2, 85.2 percent in Q3 and 86.2 percent in Q4 report using improved water sources
- 84 percent households of other castes – 81.2 percent in Q1, 89.1 percent in Q2, 78.8 percent in Q3 and 84.6 percent in Q4 report using improved water sources
- 83.2 percent households of Other Backward Castes – 80.9 percent in Q1, 85.6 percent in Q2, 82 percent in Q3 and 84 percent in Q4 report using improved water sources
- 80.1 percent of Scheduled Tribe households – 77.7 percent in Q1, 79.3 percent in Q2, 80.9 percent in Q3 and 83.3 percent in Q4 report using improved water sources.

The social group for whom the access to improved water sources is comparatively low is the Scheduled Tribe households, although there is a marked improvement from Q1 to Q4.

Table 5.2: Use of improved sources for drinking water (CCM - Consolidated)					
Percent households from different social groups using improved water sources* for drinking purpose					
Social group / caste	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
Scheduled caste	88.4	87.4	85.2	86.2	87.0
Scheduled Tribe	77.7	79.3	80.9	83.3	80.1
OBC	80.9	85.6	82.0	84.0	83.2
Other	81.2	89.1	78.8	84.6	84.0
Total	**81.8**	**84.5**	**82.0**	**9124**	**41460**

* Improved water sources included tap, public tap, hand pump and covered well

The term improved water source is like a cloud – the segregation between the type of source becomes indistinct. It is necessary to analyze which kind of water sources/water points are actually accessed by different social groups, as these actually have a variation in capital cost investment, O&M costs and supposedly the quality of water. Table 5.3 shows the different water sources used by different social groups – at a cumulative level across the quarters.

- 84 percent of the other caste households used improved water sources and most used government provided public handpumps and piped water supply. Other caste households had a comparatively higher access to the more expensive piped water supply network (25 percent) – 11.9 percent with individual tap connections and 13.1 percent with public taps. The remaining mostly reported using the public handpump (44%), but the proportion of public handpump users was lower than the other social groups. Relatively a high proportion (12.7%) used a private handpump located in the residence/yard/plot. Of the 16.9 percent households depending on unimproved sources of water – most used wells – either the public open well (9%) or the privately owned open wells (5.6%).

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- 83.2 percent of the OBC households used improved water sources. They mostly depended on the public handpump (54.1%) but also had a fairly high access to piped water sources. Piped water supply was accessed by 15.9 percent – but the access was mostly at community level (12.4 percent). 11.2 percent of the households used their own hand pumps for drinking water. Of the 17.8 percent households depending on unimproved sources of water – most used wells – either the public open well (9.1%) or the privately owned open wells (6.3%).

- 87 percent of the Scheduled Caste households reported using improved water sources, and this is the highest across all social groups. However, almost 63.5 percent of the households used the public handpump. 14.4 percent of the households had access to piped water supply – mostly through public taps (11.2%). Unimproved water sources were used by 13.9 percent households. Most of those who used unimproved water sources depended on the public open well (8.8%).

- 80.1 percent of the Scheduled Tribe households had access to improved water sources, and most (69.4%) used public hand pumps. Scheduled Tribe households had a limited access to piped water supply (8.7%) and for the most part, through community tap

(7.6%). A higher proportion of Scheduled Tribe households used unimproved sources (19.9%) like open wells for drinking water (15.7 percent) – 11.7 percent households using the public well and 4 percent using privately owned wells.

Table 5.3: Access to different drinking water sources by caste (CCM Consolidated)									
Percent distribution of the households according to main sources of drinking water by caste									
Caste	**Piped water in residence/yard/plot**	**Public tap**	**Hand pump in residence/yard/plot**	**Public Hand pump**	**Covered well in residence/yard/plot**	**Open well in residence /yard /plot**	**Public well**	**Other**	**Total N**
Scheduled caste	3.2	11.2	8.1	63.5	.9	2.7	8.8	1.4	8043
Scheduled Tribe	1.1	7.6	1.2	69.4	.8	4.0	11.7	4.2	11748
OBC	3.5	12.4	11.2	54.1	2.0	6.3	9.1	1.4	15173
Others	11.9	13.1	12.7	44.0	2.2	5.6	9.0	1.4	6496
Total	**4.1**	**10.9**	**8.0**	**58.7**	**1.5**	**4.9**	**9.8**	**2.2**	**41460**

As seen in Table 5.2, the percentage of households using improved water sources is high (83.2% at a consolidated level) in Odisha, but the distribution across the wealth quintiles shows correlation with the lowest quintile having the lowest proportion of households (79%) using improved water sources for drinking, and this progressively increasing till the fourth quintile is reached (85%). In the consolidated picture after Q4 results, a considerable difference in the proportion of households using improved water sources is seen amongst backward districts (87%) and other districts (81.3%) and the access to improved water sources seems to be higher in the backward districts and this difference was noticeable even in the previous quarters.

Table 5.3a: Percentage of household using improved source of water by background characteristics	
Characteristics	**%**
Wealth Quintile	
Lowest	79.0
Second	83.2
Middle	83.8
Fourth	85.0
Highest	84.8
Type of district	
KBK districts	87.0
Non KBK districts	81.3
Total	**83.2**

5.2 USE OF IMPROVED TOILETS BY HOUSEHOLDS

As per the WHO / UNICEF JMP definition, flush toilets, toilets with septic tanks and pit toilets are considered among safe toilet infrastructure. Unsafe sanitation practices includes toilets in which excreta is not safely contained (as for example hanging toilets, or toilets which open into open spaces or water bodies, or bucket latrines).

Toilet ownership among the sample households was reported very low. Only 17.2 percent had access to toilet facility as per the cumulative total.

- 15.9 percent households had individual toilets – 8.5 percent had individual flush toilets, 7.3 percent had individual pit latrines and 0.1 percent had other household toilets
- 1.3 percent households used community toilets – 0.8 percent households used community pit toilets while 0.5 percent households used community level flush toilets

Toilet access the various quarters show that:

- 18 percent households used toilets in Q1, with 15 percent using household toilets and 3 percent using community toilets
- 16.9 percent households used toilets in Q2, with 16.3 percent using household toilets and 0.6 percent using community toilets
- 17 percent households used toilets in Q3, with 16 percent using household toilets and 1 percent using community toilets
- 16.9 percent households used toilets in Q4, with 16.4 percent using household toilets and 0.5 percent using community toilets

Overall the trend across the quarters is consistent, but there is a slight increase in individual toilets from Q1 (15%) to Q4 (16.4%). The access to toilets does not display the same incremental increase, as the community toilets, which provide the other part of toilet access is not present in all villages, and thus, for the villages that this is present among those surveyed in different quarters, the same has added an incremental increase in toilet access in the respective quarters. However, at an overall level it is seen that less than a fifth of rural households in Odisha use toilets.

Most of these households (15.9 percent) used individual toilets - either flush toilets (8.5%) or pit latrines (7.3%) – both considered safe under the JMP definition. Only 1.3 percent households had reported using public toilets which were flush toilets or pit toilets and are also considered safe. Thus, it can be concluded, that although toilet ownership is low, most of those who own or access public toilets use improved toilet infrastructure.

The use of individual flush toilets was used by 8.2 percent households as per Q1, by 8.3 percent households as per Q2, 8.1 percent as per Q3 and 9.5 percent as per Q4.

Households using pit toilets was 6.5 percent in Q1, 8 percent in Q2, almost a similar proportion (7.8%) in Q3 and 6.8 percent in Q4. There seems to be slight decline in pit toilet owning households.

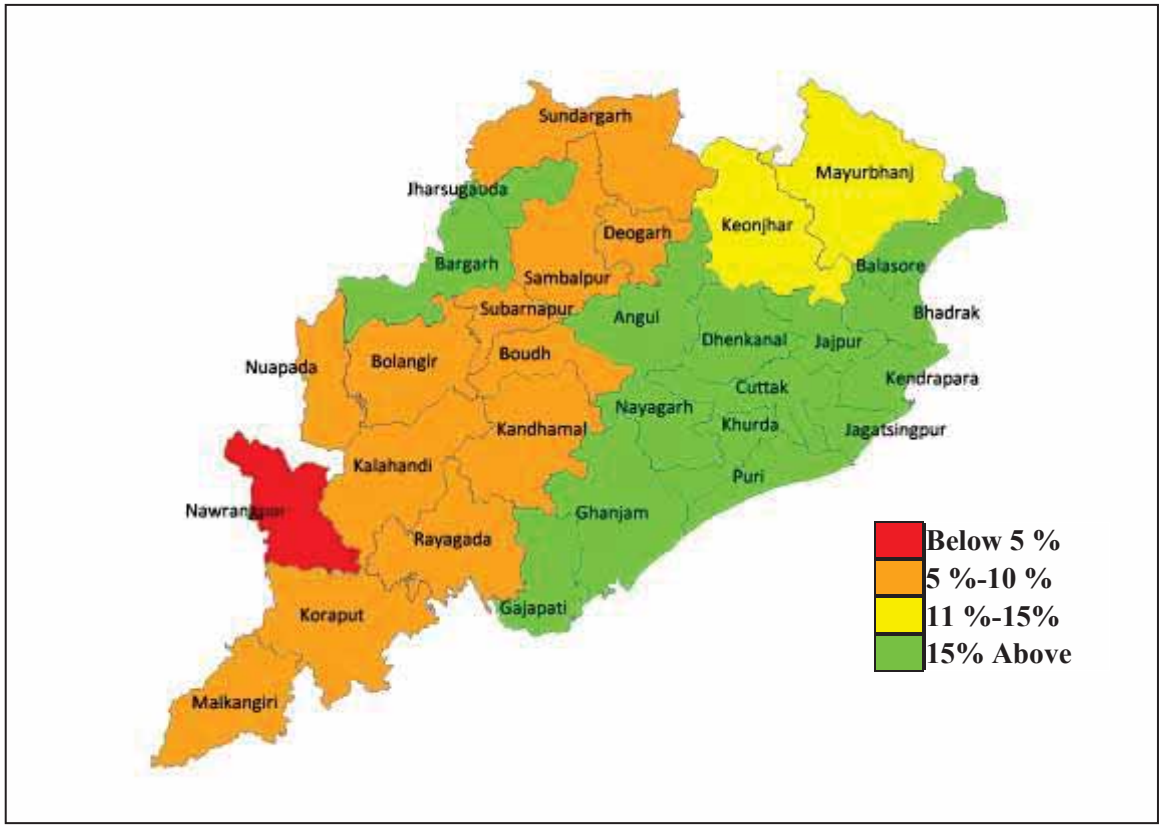
In the study sample, most of those households who practice unsafe sanitation were those which opt for open defecation (82.7% cumulative, 82% Q1, 83.1% Q2, 83% Q3 and 83.1% in Q4). Open defecation practiced by a majority of the households, would lead to spread of germs through the fly cycle and other channels by which sanitation related diseases (like diarrhoea, dysentery, helminthes, etc.) spread to homes.

Table 5.4: Use of toilet facilities					
Percentage of households reporting use of toilet facilities					
Type of excreta disposal method	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
Own flush toilet	8.2	8.3	8.1	9.5	8.5
Public/Shared flush toilet	0.7	0.3	0.7	0.4	0.5
Own pit toilet	6.5	8.0	7.8	6.8	7.3
Public/Shared pit toilet	2.3	0.3	0.3	0.1	0.8
No facility/Bush/Field	82.0	83.1	83.0	83.1	82.7
Other	0.3	0.0	0.1	0.1	0.1
Total	**11826**	**11924**	**8586**	**9124**	**41460**

The map below shows the distribution of households as per the access and use of improved toilet facilities.

- Districts with more than 15 percent households using improved toilet facilities are the eastern coastal belt and some of the central districts. The districts include Gajapati, Ganjam, Puri, Jagatsingpur, Kendrapara, Bhadrak, Balasore, Nayagarh, Khurda, Jajpur, Cuttack, Dhenkanal and Angul. Bargarh and Jharsuguda are the western districts in this group.
- Districts with 11 to 15 percent households using improved toilet facilities are Keonjhar and Mayurbhanj in the north and Rayagarh in the south. *It is interesting to note that although Keonjhar and Mayurbhanj do not score highly in the access to potable water, they are comparatively better off in terms of access to toilets.*
- Districts with 5 to 10 percent households using improved toilet facilities are in the the bulk of the western, central and southern districts which include Malkangiri, Koraput, Rayagada, Kalahandi, Kandhamal, Nuapara, Bolangir, Boudh, Subarnapur, Sambalpur, Deogarh, and Sundergarh.
- District with the lowest access (below 10% households) to improved toilet facilities is Nawrangpur and this has remained at this position in the previous quarter as well.

Map: 13- Percent of household using improved sanitation facilities



As per the cumulative figure on toilet access by social group:

- 93.9 percent of the Scheduled Tribe households do not have access to toilets. Only 4.8 percent households had individual toilets, and 1.2 percent used public toilets.

- 90 percent of the Scheduled Caste households had no toilet access. Only 8.9 percent households had individual toilets, while 1.1 percent households used public toilets. The toilet access among Scheduled Caste households is slightly more than the Scheduled Tribe households, although, both these social groups have been marginalized in terms of access to sanitation facilities.

- 76.8 percent of the OBC households did not use toilets, but, 22 percent households used individual toilets and 1.2 percent households accessed community toilets. Comparatively therefore a higher proportion of OBC households have access to household toilets.

- 67.4 percent of the other caste households did not access toilets, but this was the group which reported highest toilet access. 30.8 percent of the households had individual toilets – of which the majority (18.3%) used flush toilets. 1.8 percent of the households used public toilets.

Table 5.5: Access of households to different types of toilets by caste (consolidated)							
Percent distribution of households reporting the use of toilet facilities by caste							
Caste	**Own flush toilet**	**Public/Shared flush toilet**	**Own pit toilet**	**Public/Shared pit toilet**	**No facility/Bush /Field**	**Other**	**Total N**
Scheduled caste	4.5	0.3	4.4	0.8	90.0	0.0	8043
Scheduled Tribe	2.0	0.2	2.5	1.0	93.9	0.3	11748
OBC	11.5	0.7	10.4	0.5	76.8	0.1	15173
Others	18.3	0.8	12.4	1.0	67.4	0.1	6496
Total	**8.5**	**0.5**	**7.3**	**0.8**	**82.7**	**0.1**	**41460**

Interesting insights are obtained on the analysis of the wealth quintiles in the distribution of households using improved sanitation facilities. It is clearly seen that the concentration of households using improved toilets are among the highest quintile (wealthiest households) where more than half (55.2%) the households are using improved toilets. The fourth quintile has 16.1 percent households using improved toilets; the middle quintile has 6.9 percent, while the bottom two quintiles combined have less than 7.4 percent households with access to toilets.

It follows therefore, that the backward districts, who are expected to have the poorer population has much lower access to improved toilets (9%) as compared to other districts (21%).

Table 5.5a: Percentage of household using improved sanitation by background characteristics	
Characteristics	**%**
Wealth Quintile	
Lowest	3.3
Second	4.1
Middle	6.9
Fourth	16.1
Highest	55.2
Type of district	
KBK districts	9.0
Non KBK districts	21.0
Total	**17.1**

5.3 AVAILABILITY OF IMPROVED WATER SOURCES AND TOILETS IN THE VILLAGE

A total of 2394 Gaon Kalyan Samitis (GKS) were contacted for the study. Most of the samitis reported that there were some or the other combination of water source infrastructure available in the villages – which were both improved and unimproved. As the government's provision of improved water sources – the supply is mainly through piped water supply and public hand pumps, it is therefore important to understand what proportion of villages have government provided improved water infrastructure.

Among the improved water sources, it is seen that most villages (93.9%) have public handpumps and a fair proportion have piped water supply (26.2% with public tap and 9% with household tap). In addition to this, about 24.3 percent villages have private shallow bore handpumps. Covered wells are available in only a small proportion of the villages (2.6%).

Table 5.6: Response of GKS on type of water source available in the village					
Percent villages having different kind of drinking water sources					
Social group / caste	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
Piped water in residence/yard/plot	11.9	8.7	8.7	6	9
Public tap	26.1	26.5	27.9	24.6	26.2
Hand pump in residence/yard/plot	26.4	23.3	20.1	26.4	24.3
Public Hand pump	91.9	95.5	93.4	94.9	93.9
Covered well in residence/yard/plot	2.2	2.0	3.3	3.2	2.6
Open well in residence/yard/plot	13.4	17.2	19.7	27.8	19.1
Public well	30.5	38.3	36.5	34.2	34.8
River / Pond	4.6	8.7	9.4	4.9	6.8
Other(s)	1.2	2.0	.9	1.6	1.5
Total	**681**	**687**	**458**	**568**	**2394**

Proportion of villages reporting availability of improved water sources validated by water quality testing

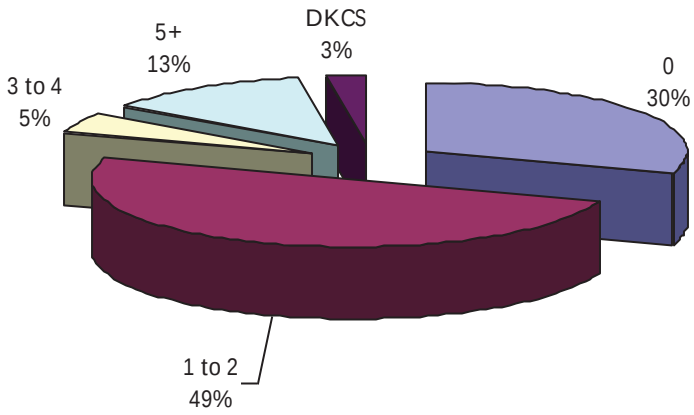
In each village the Gram Kalyan Samiti was asked about the water sources in the village and the number of improved water sources which had no water quality problems – the status established through water quality testing.

- 30.2 percent villages had no improved water sources, and this may be taken to be an alarming situation. About 2.5 percent villages did not know the status of the potability of the village water sources. The proportion of villages with no improved water sources was reported to decline from Q3 (35.4%) to Q4 (31.7%), and the Q1 (31.1%) and Q3 estimates are similar.
- 49.8 percent of the villages were those in which only 1 to 2 improved water sources were available, which is also a dire situation considering that an average village will have 200 households, and this quantum of safe water source is highly inadequate. The proportion of these villages have increased from Q1 (42.1%) to Q4 (51.4%), and is most probably a resultant of increased number of villages with water sources which have slipped back to poor quality, due perhaps to poor maintenance and breakdown of the water sources.
- 4.8 percent villages had 3 – 4 improved water sources, and this category of villages have decreased from Q1 (5.4%) to Q4 (3%)
- 12.7 percent villages had 5 and more improved water sources, but again, this category of villages have decreased in proportion from Q1 (17.9%) to Q4 (10%).

Table 5.7: Number of improved water source (quality tested) in the village					
Percentage of GKS reporting availability of improved water sources (after quality testing) in the village					
Average number of improved water sources which are considered safe after water quality testing	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
0	31.1	24.7	35.4	31.7	30.2
1-2	42.1	56.5	49.3	51.4	49.8
3-4	5.4	5.2	5.2	3	4.8
5+	17.9	11.8	9.6	10	12.7
DKCS	3.4	1.7	.4	3.9	2.5
Average	5.3	4.2	5.3	4.5	4.7
Total N	**681**	**687**	**458**	**568**	**2394**

Percentage of GKS reporting availability of improved water sources (after quality testing) in the village (CCM - Consolidated)

Fig. 5.1: Number of improved water sources in the village



Proportion of villages reporting availability of functional water sources

Since a majority of the population reported that their main water source as the public hand pump (capping a bore well or tube well), the GKS was also asked to assess what proportion of hand pumps or tube wells were functional in the village. Functionality of the water source appears not to be an issue, as the ground water table would be relatively high. 78.1 percent of the villages reported that more than 80 percent of their public hand pumps / tube wells were functional, and this proportion of villages have gone up from 74.4 percent in Q1 to 81.3 percent in Q4. Another 13.7 percent had between 60 - 80 percent functional hand pumps / tube wells.

7.8 percent of the villages appear to have water stress as less than 60 percent of the public hand pumps was functional. Of these, less than 1.3 percent villages had less than 20 percent functional public hand pumps / tube wells

Table 5.8: Percentage of functional tube wells in the village (As reported by GKS)					
Percentage of functional tube wells	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
0	1.3	1.0	1.5	0.4	1
0.1 – 19.99	.4	.3	0.2	0.2	0.3
20 – 40	1.6	2.0	0.7	1.6	1.5
40.01 – 60.00	5.7	5.4	4.6	3.9	5
60.01 – 80.00	16.4	14.0	10.9	12.3	13.7
80.01 +	74.4	76.7	81.4	81.3	78.1
System missing	0.2	0.6	0.7	0.4	0.4
Total N	**681**	**687**	**458**	**568**	**2394**

5.4 ACTIVITIES OF GKS

The Gaon Kalyan Samiti in majority of the sample villages (61.6 percent) was found to be the most active in terms of water supply and sanitation. 42.5 percent of the GKS also undertook health related development activities. The focus on other aspects like nutrition was low and only active 23.4 percent of the GKS.

Fig. 5.2: Activities undertaken by GKS in last 3 months on Health, Nutrition and Improved water and sanitation

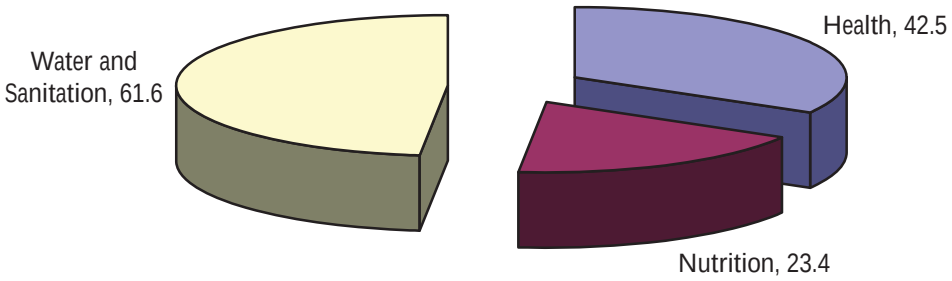


Table 5.9: Involvement of GKS in various activities					
Activities	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
Health	46.0	35.8	47.4	42.6	42.5
Nutrition	27.3	19.9	27.1	19.9	23.4
Improved water and sanitation	70.0	57.4	61.8	56.5	61.6
Total N	**681**	**687**	**458**	**568**	**2394**

The findings presented in this chapter shows that majority of the households covered in the concurrent monitoring were using improved sources of drinking water, the most common sources being the public hand pumps. The improved sources of drinking water were also available in majority of the villages. However, the sanitation coverage was very low as only 17.3% of the households had access to toilets. This calls for actions for further improvement in the provision of sanitation facilities in rural areas.

Chapter VI: LEVEL OF AWARENESS OF WOMEN

The knowledge of target groups about women's health and the care women provide to children considerably influence child health and child survival. The aim of the study was not only to assess the current scenario of child health and nutrition but also to understand the level of awareness that prevails among the target groups. This chapter details out the level of awareness among mothers of children in the age group of 0-72 months, lactating women and pregnant women about breastfeeding and complementary feeding practices, normal birth weight of the child, management of diarrhoea and ARI among children.

6.1 HEALTH AND HYGINE PRACTICES

6.1.1 Awareness about the measures to be taken in case the child suffering from diarrhea

Table 6.1 shows the measures mentioned by the mothers of children 0-72 months, lactating women and pregnant women for treatment of diarrhea. Over two-fifth (42%) of the women covered in the four quarters reported that a child suffering from diarrhea should be administered ORS and over one-fourth (27%) specifically mentioned that barest feeding should be continued for the child suffering from diarrhea. Overall, 9 percent of the women said that more liquid/water should be given in such cases. A lower proportion of mothers in Q4 than Q1 to Q3 reported that a child suffering from diarrhea should be administered ORS. The measures such as continuation of breast feeding and providing more liquids for the children suffering from diarrhea were mentioned by a relatively higher proportion of mothers covered in Q1. Majority of the women covered in each of the three quarters (over 70%) were of the opinion that a doctor/ANM should be consulted in case a child suffers from diarrhea. Overall about one-tenth of the respondents did not have any knowledge about any of the treatment of diarrhea.

Table 6.1: Awareness of women about treatment of diarrhea among children less than 6 years

Percentage distribution of women according to their awareness on treatment of diarrhoea among children

Action to be taken in case of person suffering from diarrhoea	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
Continue breastfeeding	34.2	28.7	23.6	18.4	27.0
Increase breastfeeding	2.3	0.7	1.4	0.3	1.2
Reduce breastfeeding	1.5	0.7	.4	0.1	0.7
Provide ORS to the child	41.2	45.7	43.4	38.3	42.3
Provide more water/ liquid	12	8.9	5.9	7.7	8.9
Go to ANM/ Doctor in serious cases	72	71.1	72.2	78.8	73.3
Any Other	4.1	3.5	4.4	2.4	3.6
DK/CS	10.3	7.7	7.6	9.2	8.7
Total N	**9158**	**9226**	**6639**	**7076**	**32099**

6.1.2 Treatment of ARI

The information on awareness of women regarding the actions to be taken in case of children suffering from ARI has been presented in Table 6.2. A large majority of the respondents (81%) mentioned that a child suffering from ARI should be taken to ANM/ PHC/ Doctor. About 17 percent of the respondents reported continuation of breast feeding during ARI and 10 percent mentioned that the child suffering from ARI should be kept clean and warm. About 15% of the respondents did not have any knowledge about the management of ARI. The knowledge about ARI management was more or less similar among the women covered in the four quarters.

Table 6.2: Awareness of women about treatment of ARI

Percentage distribution of women according to their awareness on treatment of ARI among children

Action to be taken in case of person suffering from ARI	Q1	Q2	Q3	Q4	Consolidated
Continue breastfeeding	20.6	17.9	15.8	10.3	16.6
Give more liquid	1.2	0.3	0.7	0.3	0.6
Keep the child clean and warm	12.6	8.8	7.5	10.8	10.0
Consult ANM/PHC Doctor	77	82.1	81.8	84.0	81.0
Other	1.6	0.4	0.8	0.9	1.0
DK CS	16	14.8	14.5	13.2	14.7
Total N	**9158**	**9226**	**6639**	**7076**	**32099**

6.1.3 Supplementation of first dose of Vitamin-A

Vitamin-A supplementation is one of the most common nutritional deficiency disorders among the young children. Various health and nutrition programmes targets children less than five years for promoting administration of five doses of Vitamin-A at an interval of every six months starting at age nine months. All the women covered in the concurrent monitoring study were asked about age at which the first dose of Vitamin A should be given. Table 6.3 shows that nearly three-fourth of the respondents covered in the four quarters did not have any knowledge about the age at which the first dose of Vitamin A should be given to the child. Overall only one-fifth of the women had the knowledge that the first dose of Vitamin A should be given at 9 months. The proportion of such women was lower in Q3 and Q4 compared to Q1 and Q2.

Table 6.3: Awareness of women about supplementation of first dose of Vitamin A

Percentage distribution of women according to their awareness on the age at which the first dose of vitamin A should be supplemented to the children

Age in months	Q1	Q2	Q3	Q4	Consolidated
At 6 months	7	2.7	2.0	2.0	3.6
At 9 months	25.9	23.4	19.4	14.5	21.3
At 12 months	3.2	4.4	2.5	0.7	2.9
At 24 months	0.1	0.0	0.0	0.1	0.1
DK CS	63.8	69.5	76.1	82.7	72.2
Total N	**9158**	**9226**	**6639**	**7076**	**32099**

6.1.4 Knowledge on prevention of iron deficiency (anemia) among children

Overall, 29 percent of the women were aware that consumption of green leafy vegetables would prevent anemia among children and one-fourth knew that regular consumption of small IFA tablets/iron syrup prevents anemia among young children. The awareness about the above two measures of prevention of anemia was relatively higher among the women covered in first quarter. Prevention of anemia through feeding of breast milk and consumption of other iron rich foods was reported by 17 and 11 percent of the women respectively. About half of the respondents in all the four quarters did not have any knowledge about the measures to be taken to prevent anemia (Table 6.4).

Table 6.4: Awareness of women about prevention of iron deficiency (anemia) among children

Percentage distribution of women according to their awareness about prevention of iron deficiency (anemia) among children

Actions to be taken to prevent anemia	Q1	Q2	Q3	Q4	Consolidated
Should consume small IFA tablets/ iron syrup regularly	25.9	21.7	23.6	22.0	23.3
Should eat green leafy vegetables	32.6	31.2	28.9	22.6	29.2
Should consume other iron rich food	14	12	10.0	5.7	10.8
Should be fed mothers milk	16	19.8	13.7	15.9	16.6
Any Others	0.4	0.1	0.1	0.1	0.2
DK/CS	49.4	47.2	50.5	56.5	50.5
Total N	**9158**	**9226**	**6639**	**7076**	**32099**

6.1.5 Awareness about hygiene practices

To assess the awareness of the women on various issues relating to hygiene practices all the pregnant women, lactating women and mothers of 6 to 72 months children covered in fourth quarter were asked the following questions.

1. Do you know that having unclean / insanitary water can create health problem?
2. Do you know that unclean / insanitary sanitary conditions at home or outside can create health problem?
3. Is hand washing with soap & water useful to make the surfaces of the hands hygienically clean?
4. Does storage in dirty or uncovered vessels, contaminate water with Germs?
5. Do you know that contaminated and unwashed food should not be eaten raw?
6. Are infants & babies more likely than adults to become ill from eating contaminated food or drinking contaminated water?
7. Does accumulation of water in your environment encourage the breeding of mosquitoes carrying Malaria, Dengue etc?

The response of the women to the above queries has been analyzed and presented in Table 6.5 .As the table shows most of the women covered in the survey were aware that hand washing with soap and water is useful to make the surfaces of the hands hygienically clean (93 %), storage in dirty or uncovered vessels, contaminate water with germs (97%), contaminated and unwashed

food should not be eaten raw (98%), Infants and babies are more likely than adults to become ill from eating contaminated food or drinking contaminated water (98%) and accumulation of water in environment encourage the breeding of mosquitoes carrying Malaria, Dengue etc (99 percent). Over two third of the women were having the knowledge that unclean / insanitary water can create health problem and unclean / insanitary sanitary conditions at home or outside can create health problem.

Table 6.5: Awareness of women about various hygiene practices	
Percentage of women who are aware about various hygiene practices	
Hygiene practices	**% aware**
Unclean / insanitary water can create health problem	70.4%
Unclean / insanitary sanitary conditions at home or outside can create health problem	67.6
Hand washing with soap and water is useful to make the surfaces of the hands hygienically clean	93.1
Storage in dirty or uncovered vessels, contaminate water with Germs	96.8
Contaminated and unwashed food should not be eaten raw	98.2
Infants and babies are more likely than adults to become ill from eating contaminated food or drinking contaminated water	98.3
Accumulation of water in environment encourage the breeding of mosquitoes carrying Malaria, Dengue etc	98.8
Total N	**7076**

6.2 PREGNANCY CARE

6.2.1 Awareness about danger signs during pregnancy

The question on danger signs during pregnancy was asked only to the pregnant women. Forty six percent of the respondents (Q1 38%, Q2 44% , Q3 51% and Q4 575) did not have any knowledge about the danger signs during pregnancy. The most common danger signs mentioned by the women were swelling of feet (29%), anemia (28 %), puffiness of face (18%t) and bleeding (10 %).

Table 6.6: Awareness of pregnant women about danger signs during pregnancy					
Percentage distribution of women according to their awareness about danger signs during pregnancy					
Danger signs	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
Anemia	29.8	32.2	24.1	24.7	28.2
Swelling of feet	34.8	30.6	24.6	21.6	28.6
Puffiness of face	24.6	16.5	16.3	15.0	18.4
Bleeding	20.4	7.1	3.8	7.9	10.4
No movement of the fetus	13.2	8.4	6.4	8.7	9.4
Prolonged labour	10.9	6.3	4.1	6.0	7.1
Other(s)	6.3	5.3	5.4	4.7	5.5
DKCS	37.6	43.8	51.2	56.8	46.4
Total N	**2354**	**2400**	**1717**	**1837**	**8308**

6.2.2 Food intake of pregnant women

The consumption of a variety of nutritious food is important for health of the women during pregnancy as a healthy mother is expected to deliver a healthy baby. Adequate amount of protein, carbohydrates, vitamins and minerals are required for a well balanced diet. Apart from that, for the proper growth of the child, it is important that the pregnant women should consume more food than normal. When asked about this, `about half of the total respondents reported that the pregnant women should have more food than the food she normally takes. The proportion of the women was relatively higher in Q2 (55%) than Q1 (49%) , Q3 (49 %) and Q4 (50%). Over one-fifth of the women carried the wrong perception that a women during pregnancy should consume less than the normal food.

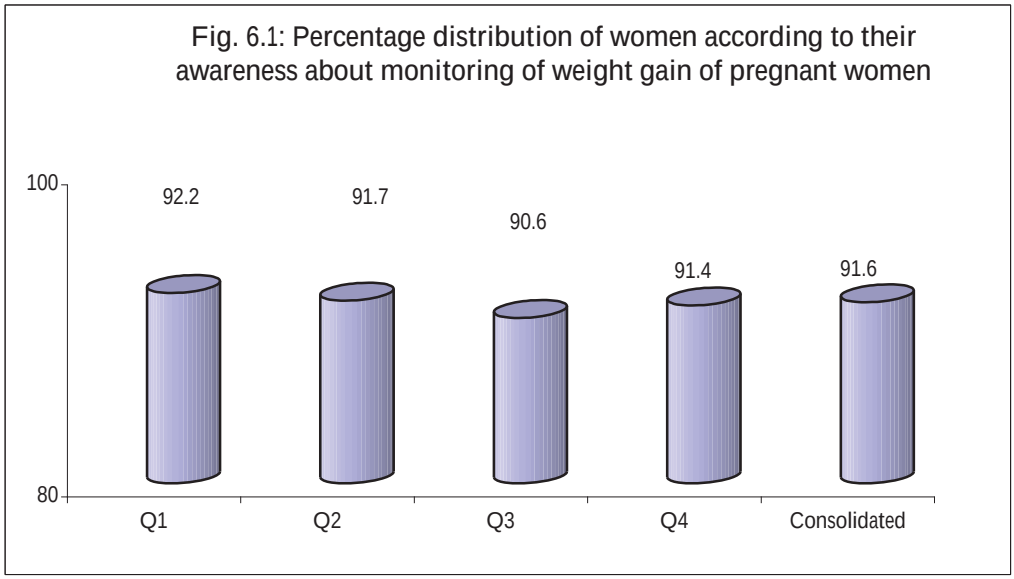
Table 6.7: Awareness of women about food intake of pregnant women

Percentage distribution of women according to their awareness about food intake of pregnant women

Food intake	Q1	Q2	Q3	Q4	Consolidated
Normal (as usual)	19.6	17.5	21.8	21.3	19.8
Less than normal	24.2	21.4	23.2	20.7	22.4
More than normal	49.1	54.7	48.6	49.7	50.7
Any other	0.3	0.1	0.1	0.1	0.2
DK/CS	6.9	6.3	6.3	8.2	6.9
Total N	**9158**	**9226**	**6639**	**7076**	**32099**

6.2.3 Monitoring of weight gain of pregnant women

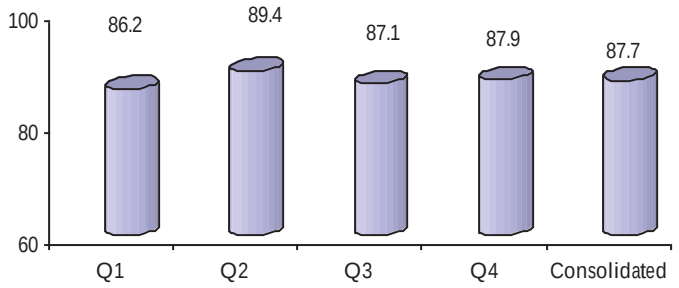
All the women covered in the concurrent monitoring study were asked as to whether they agree that the weight gain of the women during pregnancy should be monitored. The analysis of their responses has been presented in Figure 6.1. It is quite interesting to note that a large majority of the women (over 90 %) covered in each of the four quarters agreed that the weight gain of the women should be monitored during pregnancy.



6.2.4 Awareness about anemic women should consume IFA tablets/syrup everyday

In order to tackle the problem of anemia among the pregnant women emphasis is being given to inform and educate the women about the consumption of IFA tablets during pregnancy. In this context an attempt was made in the concurrent monitoring study to assess the awareness of all the three categories of women about the need for consumption of IFA tablets among the pregnant women. The results presented in Figure 6.2 show that majority of the women (88 percent) had the knowledge that the anemic pregnant women should consume IFA tablets/syrup everyday. The awareness on this issue was almost similar among the women covered in the four quarters.

Fig 6.2: Percentage distribution of women according to their awareness about consumption of IFA tablets/syrup everyday among anemic women



6.3 CHILD FEEDING AND CARE PRACTICE

6.3.1 Knowledge about initiation of breast feeding

The Government of India recommends that initiation of breastfeeding should begin immediately after childbirth, preferably within one hour. As the concurrent monitoring study shows, nearly two-third of the women knew that the new born baby should be put to breast within one hour of birth. As we have seen in the earlier chapter in line with the awareness, majority of the lactating women and mothers of 7-36 months children had also initiated within one hour of birth of the child. The level of awareness about recommended timing of initiation of breast feeding was relatively better among the women covered in Q1 compared to those covered in Q2 Q3 and Q4. (Table 6.8).

Table 6.8: Awareness of women about initiation of breast feeding

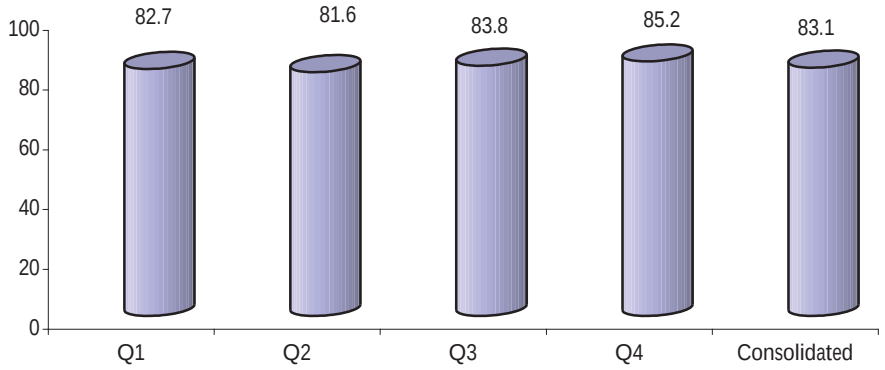
Percentage distribution of women according to their awareness about initiation of breast feeding

Timings	Q1	Q2	Q3	Q4	Consolidated
Within 1 hour	73.6	65.1	65.4	58.8	67.1
Between 1-2 hrs	16.4	21.3	20.0	22.9	19.5
Between 2-24 hours	1.6	6.2	6.7	8.0	5.4
On second day	0.4	0.2	.1	.9	.4
Any other	0.2	0.1	.1	.1	.1
DK/CS	7.9	7.0	7.8	9.2	7.5
Total N	**9158**	**9226**	**6639**	**7076**	**32099**

6.3.2 Knowledge about feeding of Colostrums

As regards colostrums feeding, over four-fifth of the women covered in all the three quarters were aware that the first milk containing colostrums should be fed to the baby (Figure 6.3).

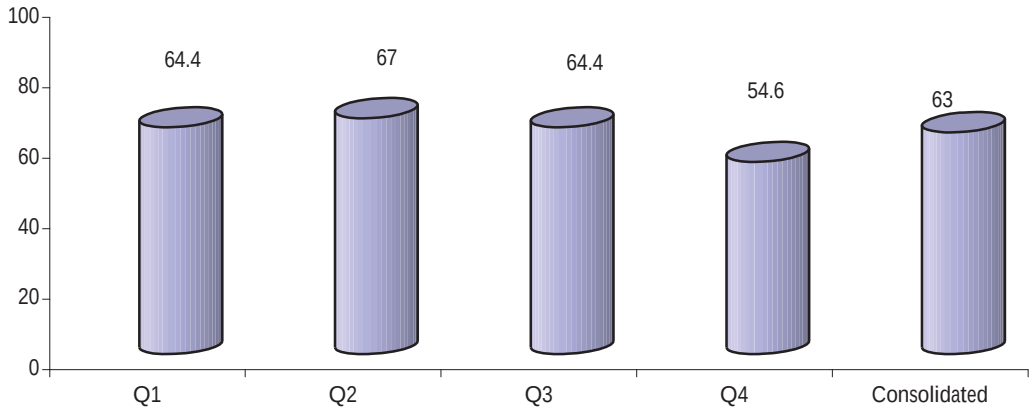
Fig 6.3:Percentage distribution of women according to their awareness about feeding of colostrums



6.3.3 Knowledge about age up to which child should be exclusively breastfed

The Government of India recommends that children should be exclusively breastfed for the first six months of life (that is, the child should be given only breast milk and nothing else, not even water). Over three fifth of the women covered in all the four quarters had knowledge about exclusive breastfeeding of the child till 6 months of age . The level of awareness was relatively lower among the women covered in the fourth quarter(Figure 6.4).

Fig 6.4:Percentage distribution of women according to their awareness about correct age up to which child should be exclusively breastfed



6.3.4 Knowledge about initiation of complementary food

The purpose of complementary feeding is to complement the breast milk and sustain the growth and development of the child. The introduction of complementary food from about six months of age is very critical to meeting the protein, energy and micronutrient needs of children. In this context attempt was made to ascertain the awareness of women about age at which a child should be given complementary food. Table 6.9 shows that majority of the women (over two-third) covered in all the three quarters knew that the child should be given complementary food between 6-8 months.

Table 6.9: Awareness of women about initiation of complementary food

Percentage distribution of women according to their awareness about initiation of complementary food

Age in months	**Q1**	**Q2**	**Q3**	**Q4**	**Consolidated**
less than 6 months	2.2	2.3	3.0	3.7	2.7
6 - 8 months	68.9	70.2	67.8	62.5	67.6
9 and above months	7.1	4.2	2.7	3.2	4.5
Total N	**9158**	**9226**	**6639**	**7076**	**32099**

The results presented on awareness of women about various health and nutrition issues especially child feeding practices and care during pregnancy was fairly good. However, there is a need to further promote the awareness of women about management of diarrhea and ARI as a majority of the women do not possess adequate knowledge on this aspect.

Chapter VII: Estimation of Maternal Mortality

Maternal mortality (MMR) is a crucial though complex measure of over all health and development status. Many contributing factors are responsible for MMR rate. The MMR is high where the mothers are malnourished, anaemic and other conditions like unsafe abortion, post partum haemorrage, obstructed labour, hypertensive disorder and post-partum sepsis. The present sections presents the MMR estimates by sisterhood method.

Estimation of maternal mortality through direct method requires large sample size which can be complex and costly. As an alternative approach, sisterhood method is used to estimate the maternal mortality. Sisterhood method is an indirect measurement technique of the kind frequently used to measure a variety of demographic parameters which has been adapted for the measurement of maternal mortality. The method reduces sample size requirement because it obtains information by interviewing respondents about the survival of all their adult sisters. It is important to mention here that while sisterhood method has many advantages including relatively smaller sample size requirements, it also has some weakness. Because such reports covers deaths occurring over a large interval of time, the result generate an overall estimate of maternal mortality for a point centered around 10 to 12 years before the survey.

The Use of sisterhood is appropriate when:

There is no reliable estimate of the level of maternal mortality

An approximate level of maternal mortality is needed for advocacy purpose and to draw attention to the problem.

Resource does not permit any other approach for measuring maternal mortality in the immediate term

A starting point is needed for a more detailed follow-up of maternal deaths identified during the recent past

The method is not appropriate for:
Measuring progress towards safe motherhood in the short term

Evaluating programme impact

Comparing geographic areas (comparing sub-national estimates)

Allocating resources

For the present study MMR has been calculated using the indirect sisterhood method. Four simple questions on their sisters have been asked to all respondents namely, mothers (having children 6 to 60 months), lactating mothers, pregnant women and adolescent girls.

The four main questions asked to the respondent to ascertain maternal mortality are:

Total number of sisters born to the same mother who were ever married (including those who are dead now)

Total number of sisters alive at present

Total number of sisters dead

Total number of sister dead during pregnancy or during child birth or during six week after end of pregnancy

The total number of married sisters reported by all the pregnant women, lactating women, mothers of 6 to 72 months children and the adolescent girls covered from all the districts of Odisha in the four quarters was 46874 and among them 134 had reportedly died during pregnancy or during child birth or during six week after end of pregnancy due to pregnancy or child birth. The maternal mortality rate was calculated using the following formula.

$$\frac{\text{Number of married sisters died due to pregnancy/child birth related causes (Total 134)}}{\text{Total number of married sisters reported by all the respondents (Total 46874)}} \text{ X } 100000$$

Thus, the Maternal Mortality Rate by sisterhood method was estimated to be 286 per one lakh married sisters. The same has been estimated to be 277 and 358 in by AHS and SRS respectively. The CCM estimates on the MMR for Odisha is higher than the AHS as well as SRS estimates for the state as for the CCM the estimates are based on sisterhood methods which includes maternal deaths occurred over a period of time where as the AHS as well as SRS gives point estimates.

PART B:

Brief Descriptive Report

1.0 Overview of Health and Nutrition Villages Services in Odisha

Odisha has seen an improvement in the health and nutritional status of its people over the last two decades. However, infant mortality in the state has remained the highest in the country and is posing a big challenge for the State. Maternal mortality also is still a concern.Odisha's Maternal Mortality Ratio (MMR) is estimated to be 258 (SRS-2009) while Infant Mortality Rate (IMR) has been estimated as 61 per 1000 children (SRS 201009). Moreover, widespread disparity both between the geographical areas as well as between social groups has been observed. MMR and IMR are very high in the rural areas and among the vulnerable section of the community.[3]

Odisha Profile		
Indicators	**Odisha**	**India**
Population (Million in 2011)	41.9	1210
Population 0-6 yrs (Million in 2011)	5.0	158.7
SC and ST Population (%) -2001	38.5	24.4
Rural population (%) - 2011	83.3	68.8
Sex Ratio - 2011	978	940
Population below poverty line (%)	46	27.5
Per capita income	346	736
Literacy - 2011	73.5	74
Female literacy - 2011	64.4	65.5
Out of school children (%)	7.2	4.3
IMR (SRS 2010)	61	47
NMR (SRS 2009)	43	34
MMR (SRS 2009)	258	212
Under weight U-3 children (%)	44.0	45.9
Drop out rate in primary (%)	39	29
Source: Census 2011,Census 2001,SES 2004-05,DIES 2006-07, NSSO 61 round, Economic Survey 2007-08, SRS 2009 and 2010, ASER -2008		

As regards the nutritional status of children, the state has shown an improvement viz. the sex ratio is 978 girls per 1000 boys against the national average of 940; neonatal mortality is 43 (SRS 2009)percent which is much higher than the national average of 34 (SRS 2009). However, the state has a significant malnutrition problem and it is concentrated in particular vulnerable groups namely women and children within poor and extremely poor. In order to stabilize the positive trend and accelerate improvement the health and nutritional services reflect the need of synergizing, addressing the issues together as both health and nutrition compliments and supplements each other.

Government of Odisha considers inter-sectoral coordination critical to achieve the health outcomes that are affected by a range of factors viz., nutrition, safe drinking water and sanitation, infrastructure and connectivity. At the state level the coordination takes place through Mission Steering Group, which includes the secretaries of the key departments. At the service delivery level, inter-sectoral coordination takes place through integrated planning process that have been put in place at the district level, block and community level. The Department of Women and Child Development focuses on this coordination as there are considerable synergies between activities under the ICDS programme and the nutritional and health outcomes of women and children.[4]

The DoH&FW and DWCD are responsible for delivering health and nutrition services through a vast number of village-based centres (about 71000 Anganwadi centres and nearly 7000 health sub

[3] State Plan for Action for Children (2009-2012), Department of Women and Children, Government of Odisha

[4] Odisha Health Sector Plan (2005-2010)

centres). There are also a number of special outreach days and activities carried out through village Health and Sanitation committees (known in Odisha as Gaon Kalyan Samitis (GKS), which number around 44,000.

Whilst there are large staffs to deliver these services and internal monitoring systems in place, there is a paucity of high quality, objective, regularly generated data about how services are provided, good practices and service failures. The data is needed to inform local and state level management decisions for corrective action to improve services.

Towards the above and in accordance with the objectives of concurrent monitoring, this part of the report presents brief descriptive reports on the status of various facilities available at the village level, availability of functionaries, condition and functionality of the centres, availability of instruments, equipment and supplies etc. It also attempts to highlight good and poor practices observed during the fieldwork for the attention of the programme managers of DWCD and DoHFW

In the subsequent sections, the findings pertaining to the following functionaries and centres and activities have been discussed:

- Anganwadi Workers and Centres
- ANM and Sub Centres
- Gaon Kalyan Samities (GKS)
- Mamta Divas (Village Health and Nutrition Day)
- Pushtikar Divas
- Sector Meetings

2.0 Anganwadi Centers and Anganwadi Workers

'*Anganwadi*' literally means a courtyard play center. It is essentially a child care center located within the village or ward. It is a center for holistic development of children and mothers. An Anganwadi Centre (hereafter referred as AWC) is the focal point of delivery of services under ICDS. There are around 52,000 AWCs spread across the State of Odisha providing the much needed services to children below sex years, pregnant women and nursing mothers.

The AWCs are primarily managed by Anganwadi Workers (hereafter referred as AWWs) and supported by Anganwadi Helpers (hereafter referred as AWHs). AWWs own major responsibility of implementing an integrated package of services to children and women in their allocated areas. They play a very crucial role against scourges of child malnutrition, infant mortality and curbing preventable diseases. Essentially, an AWW should be a local woman belonging to the same village or ward. Minimum education required for the AWW is matriculate. However, in the absence of any matriculates among Scheduled Tribe and Schedule Caste the 8th pass candidate can be considered.

An AWW is expected to perform the following functions:[5]

- Community survey and enlisting beneficiaries; survey children below six year of age, pregnant women and nursing mothers; and collect vital statistics particularly new births and deaths (especially death among children and mothers)

[5] epragati (Department of Women and Child Development, Govt. Odisha, Odisha portal)

- Supplementary feeding of 0-6 years children, pregnant and nursing mothers
- Non-formal education of children between 3 and 6 years of age
- Health and nutrition education to women, children and community
- Primary health care and first aid to children under six, pregnant and nursing mothers.
- Detect impairments among children in early stages and help in prevention of disabilities in early stages
- Contact the parents of children coming to the Anganwadi through home visits and ensuring their participation in the programme
- Assisting health staff in immunization and health check up
- Referral services for severely undernourished/malnourished, sick and at risk children and cases of communicable diseases and children with impairment
- Maintaining records/ registers, particularly weight cards, child health cards, Supplementary Nutrition records, Anganwadi attendance records etc.
- Maintaining liaison with other institutions in the village/urban areas e.g. Panchayats, Mahila Mandals, Schools, local organizations etc. and seeking their support and participation in the ICDS programme
- Take weight measurement of children (0-6 years) and plot those in a growth chart and inform the care takers of the children accordingly.

In order to perform the above functions it is expected that the AWCs have adequate infrastructural facilities and equipment. The concurrent monitoring aimed at assessing the availability of facilities and equipment in the AWCs. While 1232 AWCs were covered during Quarter 1 (Q1) of the survey, in all 1293 AWCs were covered during the second quarter (Q2), 897 in third quarter (Q3) and 979 in fourth quarter (Q4) making the overall coverage of 4401 AWWs..

The target coverage of AWC and AWWs for Q4 was 1035. Out of the 1035 AWC the AWWs were found to be present on the day of visit in 982 cases, in 53 cases AWWs were absent and in 2 cases AWWs were not posted and in 1 case the AWW did not agree to participate in the interview (Table B2.1).

Table B2.1: Coverage of AWWs

Coverage of AWWs	Q1 Observation (90 Blocks)	Q2 Observation (90 Blocks)	Q3 Observation (65 Blocks)	Q4 Observation (69 Blocks)	Consolidated
Target AWW	1350	1350	975	1035	4710
Present on the day of visit	1248	1300	897	982	4427
Absent on the day of visit	87	50	58	53	248
Not posted in the AWC	15	7	10	2	34
Did not agree for interview	16	0	0	1	17

Interviewed	1232	1293	897	979	4401
Total (N)	**1232**	**1293**	**897**	**979**	4401

The table below presents a summary of the findings of the AWC survey.

Summary Findings of AWC Facility Survey

Sl. No	Indicators	Q1 Obs (% of AWCs)	Q 2 Obs (% of AWCs)	Q 3 Obs (% of AWCs)	Q 3 Obs (% of AWCs)	Consolidated
1	% AWC located within the village	99.2	99.3	98.9	98	99.2
2	% of AWW staying in the same village	83.6	87.5	87.2	87.4	86.3
3	% of AWC functioning from own building	39.6	39.6	38.1	43.2	40
4	% AWC operating in open space and verandah	4	3.6	4.6	3.6	3.9
5	% AWC buildings in very good good condition	61	59.2	61.4	67.8	62.7
6	% AWC having adequate space	57.6	54.5	51.5	58.9	55.8
7	% AWC with separate kitchen	44.5	41.7	41.6	41,2	42.4
8	% AWC with electricity supply	11.8	8.6	10.4	9.4	10.1
9	% AWC with storage space	42.9	44.8	44.5	44.7	44.7
10	% AWC having garbage bin	13.7	14.2	17.2	13.8	14.6
11	% AWC observed the drinking water pot is covered with a lid	48.7	50	48.5	48.7	49
12	% AWC having toilets	26.5	21.4	21.5	25.5	23.4
13	% of toilets in the AWC found to be clean	36.4	38.3	35.2	46.8	39.2
14	% AWC having functional Salter Scale	77.5	80.2	80.8	84.3	80.5
15	% AWC having adequate number of growth monitoring charts	63.1	60.6	62.5	61.7	61.9
16	% AWC having weighing machine for adults	35.9	41.4	40.9	43.2	40.1
17	% AWC having pre-school kits	80.8	79.4	81.4	79.3	80.2
18	% AWW having SIM card	79	84.9	90.4		85.7

	for communication				90.8	
	Total (N)	**1232**	**1293**	**897**	**979**	**4401**

The subsequent sections present the findings in detail.

2.1 Location of AWC

As per the guideline the AWC should be located within the village or ward. Most of the AWCs (99%) visited during Q1, Q2, Q3 and Q4 were found to be located within the village.

Table B2.2: Location of AWC

Location of AWC	Q1 Observation (% of AWCs)	Q 2 Observation (% of AWCs)	Q 3 Observation (% of AWCs)	Q 4 Observation (% of AWCs)	Consolidated
With in the village	99.2	99.3	98.9	98	99.2
Outside the village locality	0.8	0.7	1.1	2	0.8
Total (N)	**1232**	**1293**	**897**	**979**	**4401**

2.2 Location and Distance of Anganwadi Workers' Residence from AWC

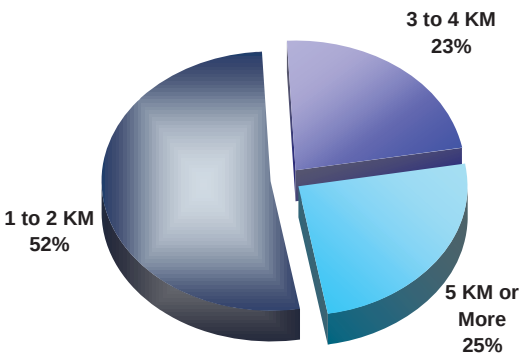
ICDS guideline mandates that the AWW should be selected from the same village where the AWC is located and she should be from the same community. The strategy is to improve accessibility of ICDS services by the target beneficiaries.

Table B2.3: Location of AWWs' Residence

Location of AWWs' Residence	Q1 Observation (% of AWWs)	Q 2 Observation (% of AWWs)	Q 3 Observation (% of AWCs)	Q 4 Observation (% of AWCs)	Consolidated
With in the village	83.6	87.5	87.2	87.4	86.3
Far from village locality	16.4	12.5	12.8	12.6	13.7
Total (N)	**1232**	**1293**	**897**	**979**	**4401**

Out of the 4401 AWWs interviewed 86.3 percent were found to be residing within the AWC village while the remaining 13.7 percent came to the AWC from outside the village. (Table B 2.3). Among those who

Fig. B2.1: Distance of AWW's from AWC- (consolidated Q1+Q2+Q3+Q4)



stayed out side the AWC village, nearly 52 per cent stayed 1 to 2 Km away from the AWC village; 23 per cent stayed at the distance of 3 to 4 Km; and 25 per cent stayed 5 Km and beyond indicating their inaccessibility (Fig. B2.1).

2.3 Condition of AWC

Condition of the infrastructure plays an important role in the service delivery. During the fieldwork various aspects like place of operation, condition of the building, place where the AWC is operating, adequacy of space, cleanliness were observed. Apart from the condition of the buildings, information on availability of various basic amenities and facilities viz., electricity, toilet, storage facility, pre-school kit, instruments and equipment, separate kitchen etc., in the AWC were also captured.

2.3.1 Place of Functioning

Out of the 4401 AWCs contacted a, close to two-fifths operated from own buildings (Government), slightly less than one-fourth from School building and another 14 per cent from Panchayat Building. It was observed that nearly one-tenth of the AWCs were functioning from AWW's and AWH's residence as well. Locations such as open space/verandah and temples were also used to carry out AWC activities (Table B2.4).

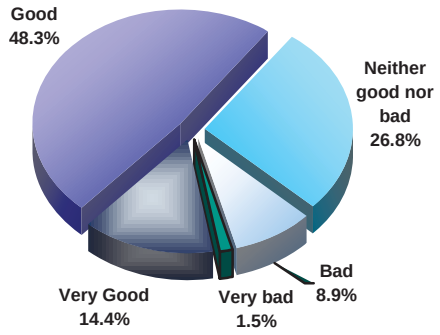
Table B2.4: Place of Functioning of AWC

Place of Functioning of AWC	Q1 Observation (% of AWCs)	Q 2 Observation (% of AWCs)	Q 3 Observation (% of AWCs)	Q 4 Observation (% of AWCs)	Consolidated
Own building	39.6	39.6	38.1	43.2	40
Rented building	6	6.4	6.4	4.7	5.9
Anganwadi worker's (AWW) residence (not rented)	7.8	8.7	7.6	7	7.9
Panchayat / community building	13.4	13.6	15.4	13.4	13.9
School building	23.5	20.4	22.6	22.5	22.2
Temple	1.3	1.6	1.1	1.8	1.5
Open space / Verandah	4	3.6	4.6	3.6	3.9
Anganwadi helper's residence	0.8	2.4	2	2.2	1.8
Lift irrigation office	0.6	0.1	0.1	0	0.2
Others	3	3.8	2.1	1.5	2.7
Total (N)	**1232**	**1293**	**897**	**979**	**4401**

2.3.2 Physical Condition of the Building

In case of AWCs that operated from any structured place i.e. buildings, an attempt was made to observe the physical condition of the building. The field team observed and rated the physical condition of the AWC building on a 5-point scale – 'very good'; 'good'; 'neither good nor bad'; 'bad'; and 'very bad'. The findings revealed that the condition of the buildings of 62.7 percent of the AWCs was very Good/Good; 10.4 percent of the AWCs was very bad/bad; and in case of 26.6 per cent, the condition was neither good nor bad. (Fig. B.2.2)

Fig. B2.2: Physical Condition of AWC



2.3.3 Adequacy of Space in the AWC

The AWC requires enough space to carry out various activities as mandated by the ICDS service package for Women, Children and Adolescent girls. The AWC conducts pre-school, spot feedings, '*Mamata Divas*' (Village Health and Nutrition Day) where adequate space is needed. In this context the field team observed the AWC and reported regarding the adequacy of space. While in case of 55.8 percent of the AWCs the space was observed to be adequate, in case of around 44.2 percent the space was in-adequate to conduct its various functions. (Table B2.5)

Table B2.5: Adequacy of Space in AWC

Adequacy of Space in AWC	Q1 Observation (% of AWCs)	Q 2 Observation (% of AWCs)	Q 3 Observation (% of AWCs)	Q 4 Observation (% of AWCs)	Consolidated
AWC with adequate space	57.6	54.5	51.5	58.9	55.8
AWC with inadequate space	42.2	45.5	48.5	41.1	44.2
Total (N)	**1232**	**1293**	**897**	**979**	**4401**

2.3.4 Availability of Separate Kitchen

One of the important tasks of the AWH is to prepare the food and provide the spot feeding to children. Hence, a separate kitchen is required so that the other activities of the center are not affected. Separate kitchen was observed in case of 42 percent of the AWCs, in the remaining cooking was either done in some open space outside the AWC or in the same room. (Table B2.6)

Table B2.6: Availability of Separate Kitchen

Separate Kitchen in AWC	Q1 Observation (% of AWCs)	Q 2 Observation (% of AWCs)	Q 3 Observation (% of AWCs)	Q 4 Observation (% of AWCs)	Consolidated
AWC having separate kitchen	44.6	41.7	41.6	41.2	42.4
AWC not having separate kitchen	55.4	58.3	58.4	58.8	57.8
Total (N)	**1232**	**1293**	**897**	**979**	**4401**

2.3.5 Aspects of Cleanliness in the AWC

As per the norms it is expected that the AWW ensures that the AWH cleans the AWC before the children come in every morning and provide a clean atmosphere. For the observation of the field team to be objective they were specifically asked to observe and report availability of garbage bin in the AWC, to check whether the pot containing drinking water is covered and whether there are garbage and waste dumps near the AWC premises. It was observed that garbage bins were kept only in 15 per cent of AWCs and in case of 12 per cent of AWCs there were garbage dumps near the AWC premises. As regards the observation of the drinking water pots, in nearly half of the centres (49%) the pots were covered. (Table B2.7)

Table B2.7: Aspects of Cleanliness

Aspects of Cleanliness	Q1 Observation (% of AWCs)	Q 2 Observation (% of AWCs)	Q 3 Observation (% of AWCs)	Q 4 Observation (% of AWCs)	Consolidated
Availability of Garbage Bin	13.7	14.2	17.2	13.8	14.6
Drinking Water pot is covered	48.7	50	48.5	48.7	49
Garbage and Waste dumps near the AWC premises	16.5	9.7	10.4	11.7	12.2
Total (N)	**1232**	**1293**	**897**	**979**	**4401**

2.3.6 Availability of Toilets and its Cleanliness

The consolidated status across four quarters indicated that 23 percent of the AWCs did not have any toilet facility. As regards the cleanliness of the toilet in the AWCs which had the facility, only in case of 39 percent the toilets were clean. (Table B2.8)

Table B2.8: Availability of Toilets and its Cleanliness

Availability of Toilets	Q1 Observation (% of AWCs)	Q 2 Observation (% of AWCs)	Q 3 Observation (% of AWCs)	Q 4 Observation (% of AWCs)	Consolidated
AWC having Toilets	26.5	21.4	21.5	25.5	23.4
AWC not having Toilets	73.5	78.6	78.5	74.5	76.2
Total (N)	**1232**	**1293**	**897**	**979**	**4401**
Cleanliness of Toilets					
AWC Toilets clean	36.4	38.3	35.2	46.8	39.2
AWC Toilets not clean	63.6	61.7	64.8	53.2	60.8
Total (N)	**327**	**277**	**193**	**250**	**1047**

2.3.7 Sources of Water in AWC

A majority of AWC (90%) was observed to depending on tube well and hand pumps. Around 3 per cent used piped water supply with individual taps while a 4 percent used piped water supply. Nearly 6 percent of AWC used wells. A small number of AWC were found using pond and river water as well for drinking purposes (Table B2.9).

Table B2.9: Sources of Water in AWC

Source of Water in AWC	Q1 Observation (% of AWCs)	Q 2 Observation (% of AWCs)	Q 3 Observation (% of AWCs)	Q 4 Observation (% of AWCs)	Consolidated
Tube well with hand pump	88.3	90.4	90.1	92.1	90.1
Piped water supply with individual tap	4.1	3.1	2.3	1.2	2.8
Piped water supply with stand post	4.3	4.3	4.9	3.6	4.2
Well	6.8	7	4.7	4	5.8
Pond/River	0.5	0.7	1.1	0.5	0.7
Others	0.9	1	2.2	1.1	1.2
Total (N)	**1232**	**1293**	**897**	**979**	**4401**

2.3.8 Electricity Supply in AWC

It was observed during both the quarters that in as many as 90 percent of the AWC, there was no electricity connection. In case of 5 per cent AWC the supply was found to be intermittent and in case of another 5 percent of AWCs the supply of electricity was regular (Table B2.10).

Table B2.10: Electricity Supply in AWC

Electricity Supply to AWC	Q1 Observation (% of AWCs)	Q2 Observation (% of AWCs)	Q 3 Observation (% of AWCs)	Q 4 Observation (% of AWCs)	Consolidated
Yes 24 X 7	5.5	5.1	5.4	5	5.3
Intermittent supply	6.3	3.5	5	4.4	4.8
No supply	88.2	91.4	89.6	90.6	90
Total (N)	**1232**	**1293**	**897**	**979**	**4401**

2.3.9 Availability of Storage Facilities

The storage facility for Supplementary Nutrition (hereafter SNP) was found only in 45 percent of the AWCs. Although supplementary feeding to children and other beneficiaries is one of the important activities of the AWC, separate storage facility was not there in 55 per cent of the AWCs (Table B2.11).

Table B2.11: Availability of Storage Facility

Availability of Storage Facilities	Q1 Observation (% of AWCs)	Q2 Observation (% of AWCs)	Q 3 Observation (% of AWCs)	Q 4 Observation (% of AWCs)	Consolidated
AWC having storage facility for SNP	42.9	44.8	44.5	44.7	44.7
AWC not having storage facility for SNP	57.1	55.2	55.5	53.3	55.3
Total (N)	**1232**	**1293**	**897**	**979**	**4401**

2.3.10 Availability of Instruments and Equipment

Growth monitoring is one of the important activities of the AWC. Every month the children between 0 to 6 years are weighed at least once and the measured weight is plotted in a growth chart. Based on the weight the child's nutritional status is determined and if the child is found to be severely malnourished then he is referred to the 'Pushtikar Divas' for the treatment by a pediatrician. It was observed that functional Salter scales were available in 80.5 per cent of the AWC. The Salter scales were available in yet another 5.5 percent of the AWCs but were observed to be not in working condition.

As regards the adult weighing scales, it was found that only in 40.1 percent of the AWCs the scales were available and in functional condition. In as many as 11.8 percent of the AWCs the scales were available but not working. Similarly growth monitoring chart were found to be available in 61.9 per cent AWC (Table B2.12).

Table B2.12 Availability of Instruments and Equipment

	Q1 Observation		Q2 Observation		Q3 Observation		Q4 Observation		Consolidated	
Instruments and Equipment	**Available and functional**	**Available but not functional**	**Available and functional**	**Available but not functional**	**Available and functional**	**Available but not functional**	**Available and functional**	**Available but not functional**	**Available and functional**	**Available but not functional**
Salter Scale for Children	77.5	6.3	80.2	4.9	80.8	6.1	84.3	4.5	80.5	5.5
Adult Weighing Machine	35.9	16.5	41.4	9.7	40.9	8.9	43.2	11.2	40.1	11.8
Growth Monitoring Chart	63.1	8.5	60.6	6.9	62.5	5.7	61.7	7.2	61.9	7.2
Total (N)	**1232**	**1232**	**1293**	**1293**	**897**	**897**	**979**	**979**	**4401**	**4401**

2.3.11 Availability of pre-school kits

The AWC provides an opportunity for the children in the age group of 3 to 6 years to a joyful learning. In order to increase the interests among the children the AWC provides various pre-school learning materials. Pre-School kit was found in 80.2 per cent school (Table B2.13).

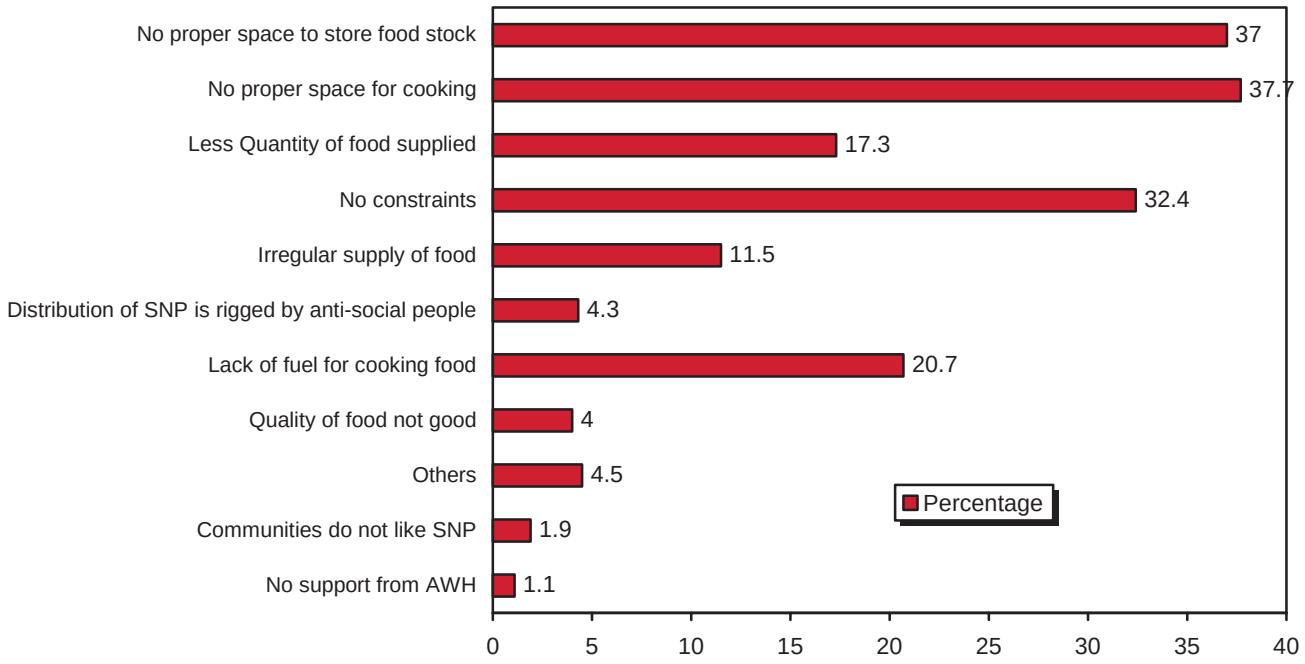
TabB2.13: Availability of Pre-school Kit

Availability of Pre-School Learning Kit	**Q1 Observation (% of AWCs)**	**Q 2 Observation (% of AWCs)**	**Q 3 Observation (% of AWCs)**	**Q 4 Observation (% of AWCs)**	**Consolidated**
AWC with pre-school kit	80.8	79.4	81.4	79.3	80.2
AWC without pre-school kit	19.2	20.6	18.6	20.7	19.8
Total (N)	**1232**	**1293**	**897**	**979**	**4401**

2.3.12 Supplementary Nutrition Service

One of the major services provided by AWC is supplementary nutrition to children, pregnant women and nursing mothers. Supplementary nutrition is either provided as Take Home Ration (THR) or Spot Feeding. Children in the age group of 3 to 6 years and attending pre-school in the AWC are provided cooked food as spot feeding.

TabB2.3: Major Constraints in Supplementary Nutrition (Consolidated Q1 +Q2)



Around one-thirds of the AWWs (33%) revealed that they are not facing any problems concerning supplementary nutrition in their centers. However this important service was facing many constraints. Major stumbling blocks in supplementary nutrition service were lack of space for storage food and cooking (37 % and 37.7 % respectively). The other constraints reported by the AWWs were supply of inadequate quantity of food (17.3%), lack of fuel (20.7%), irregular supply of food (11.5%), distribution of food is rigged by anti-social elements (4.5%) and poor quality of food (4%). (Fig. B2.3).

2.3.13 Availability of Reliable Communication to Communicate with ANM/Sub-Center

A reliable and effective communication mechanism between the AWC and sub-center or Primary Health Center (PHC) enables the AWW to inform any health emergency for quick action. It was found that 85.7 per cent of AWWs had SIM cards while 4.7 per cent relied on Public Call Office (PCO). Around 4 per cent of the AWC had no reliable communication mechanism to communicate with the sub-center or PHC during emergency (Table B2.14).

Table B2.14: Availability of Reliable Communication Mechanism

Availability of Reliable Communication	Q1 Observation (% of AWCs)	Q2 Observation (% of AWCs)	Q 3 Observation (% of AWCs)	Q 4 Observation (% of AWCs)	Consolidated
Land line	1.6	1.9	1.2	3.7	2.1
SIM card	79	84.9	90.4	90.8	85.7
PCO	7.1	6.3	3.5	0.6	4.7

Availability of Reliable Communication	Q1 Observation (% of AWCs)	Q2 Observation (% of AWCs)	Q 3 Observation (% of AWCs)	Q 4 Observation (% of AWCs)	Consolidated
Panchayat/Other government office	0.2	0.2	0.0	0.1	0.1
No reliable communication system	8.2	3.1	2.5	1.3	4
Sub-center is nearby	3.9	3.6	2.5	3.1	3.4
Total (N)	**1232**	**1293**	**897**	**979**	**4401**

2.3.14 Regularity in Observation of Mamata Divas (Village Health and Nutrition Day)

Mamata Divas is a very important event where the health functionaries and the nutrition functionaries together assess the nutritional status and the health status of the beneficiaries. It is a fixed event and is observed in the AWC every month. The health check-up of all severely malnourished children, pregnant & lactating women are conducted on this day. The counseling for appropriate nutrition is also imparted to pregnant & lactating mothers and mothers of malnourished children. The children having growth faltering are also checked up and properly advised and referred to higher centers if required.

Nearly 96 percent of the AWW confirmed that the Mamata Divas (VHND) was held regularly on the stipulated days in their AWCs. In the remaining 4 per cent Mamata Divas was not observed due to various reasons (Table B2.15).

Table B2.15: Regularity of Mamata Divas Observation in AWC

Regularity of Mamata Divas Observation in AWC	Q1 Observation (% of AWCs)	Q 2 Observation (% of AWCs)	Q 3 Observation (% of AWCs)	Q 4 Observation (% of AWCs)	Consolidated
Regular observation of Mamata Divas (%)	95.8	95.7	96.4	95.3	95.8
Mamata Divas not observed Regularly (5)	4.2	4.3	3.6	4.7	4.2
Total (N)	**1232**	**1293**	**897**	**979**	**4401**

2.3.15 Perception of Women on AWC

During the household survey perception of the women on AWC was assessed. The consolidated findings for Q1, Q2, Q3 and Q4 indicated that a high proportion of Lactating mother and pregnant women (84%) and Mothers of 6 to 59 months (85%) reported the staff in the AWC to be friendly. Around 70 -74 per cent Lactating mothers, pregnant women and Mothers of 6-59 month old children revealed that the staff of the AWC is available most of the time. Around 65-68 per cent of the women also believed that the staff is well qualified. However, a slightly lower percentage found the AWC to be providing prompt services and very few considered that the stock and supplies at the AWC are adequate. Overall around two-thirds were satisfied with the performance of the centre (Table B2.16).

Table B2.16: Perception of Women on AWC **(%)**

	Particulars	Staff is most of the times available as per schedule	Staff is friendly and well behaved	The staff is well qualified	Services are prompt at the AWC	The stock/supply is adequate*	Satisfied with performance of center
Q1 Observation	**Lactating women**	65.1	77.8	62.3	50.1	33.6	59.9
	Pregnant women	66.5	78.3	60	45.9	32.6	60.1
	Mothers of 6-59 months	69.4	78.6	63.5	49.5	34.5	62.6
Q2 Observation	**Lactating women**	72.4	86.7	68.1	55.8	31.2	67.1
	Pregnant women	71.3	85.7	66.6	51.5	28.4	64.3
	Mothers of 6-59 months	75.2	87.6	69.2	54.9	31.9	67.6
Q3 Observation	**Lactating women**	73.7	87.3	68.3	53.9	24.6	69.1
	Pregnant women	75	87.2	68.8	52.4	23.4	66
	Mothers of 6-59 months	78.8	89.3	72.3	57.8	24.9	70.2
Q4 Observation	**Lactating women**	78.9	86.7	73.4	60.3	24.1	74.0
	Pregnant women	80	85.4	73.3	56.1	21.7	72.8
	Mothers of 6-59 months	82.2	87.8	76.2	59.6	23.1	75.2
Consolidated	**Lactating women**	72	84.3	67.6	54.8	28.9	67.7
	Pregnant women	72.6	83.9	66.7	51.1	27.1	65.9
	Mothers of 6-59 months	75.2	85.4	69.7	55	29.2	69

*** Large proportion of the beneficiaries are not aware of the supply of stock**

Summary

AWW is the key to the health and nutrition services to the children, pregnant women, lactating mothers and mothers of children 6 to 71 months. Being an insider she is acceptable to the community. Hence, her presence in the same village is very crucial from the view of service delivery. During the Q1, Q2, Q3 and Q4 observation majority of the AWWs were found to be staying in the AWC village. Despite the fact that the AWWs were staying in the AWC village, the basic infrastructure for AWCs was lacking which adversely affecting the functioning of the AWC. Only 40 per cent of the AWCs were operating from their own building, while others were functioning from School buildings, Community/Panchayat buildings and temples. It is to be noted that around 3.9 per cent of the AWC were functioning from open space / verandah. In case of a

little more than 10 percent of the AWCs, the buildings were in bad condition. A basic amenity like toilets was not available in nearly three-fourths of the AWCs while 90 per cent did not have electricity. Equipment like Salter scale and MUAC tapes are very important for growth monitoring of children but in more than one-fifths of the AWCs it was not available and in some cases the available salter scales were found to be defunct. Another aspect of concern was of lack of storage space for SNP and irregularity of supply of food. Mamta Divas, an activity as important as Mamta Divas was being held regularly in nearly 96 percent of the AWWs. As regards the community satisfaction, around two-thirds of the Lactating mother, Pregnant Women, and Mothers of 6 to 59 months, each expressed satisfaction over various services that they received from the AWC.

3.0 Sub-Center and Auxiliary Midwife Nurse (ANM)

The Sub-Center is the most peripheral and the first point of contact between the primary health care system and the community. As per the population norms one sub-center should be established for every 5000 population in the plain areas and for every 3000 population in hilly/tribal/desert areas. As the population density in the country is not uniform, it also depends upon the caseload of the facility and distance of the village / habitation that comprise the sub-center.[6] As mentioned earlier it is the lowest rung of a referral pyramid of health facilities consisting of the sub-center, Primary Health Centres, Community Health Centres, Sub-Divisional Hospital, Sub-District Hospital and District Hospital.

The role of the Sub-Center is primarily preventive and promotive. However, it also provides the basic level of curative care. The services provided by the Sub-Centre can be classified as essential and desirable. The Sub-Centre is required to provide the following essential services to the beneficiaries:

- **Maternal Health (a**ntenatal care, intra-natal care and postnatal care)
- **Child Health (**promotion of exclusive breast feeding, immunization, vitamin A prophalyxis and prevention and control of childhood diseases and malnutrition)
- **Family Planning and Contraception (**education motivation to adopt appropriate family planning services, provision of contraceptives and follow up services to eligible couples)
- **Safe Abortion** (counseling and referral for safe abortion and follow up)
- **Curative Services (**provide treatment for minor ailment, appropriate and prompt referral and provide treatment as per AYUSH)
- **Control of Local Endemic Services**
- **Disease Surveillance**
- **Outreach and Field Services**

The concurrent monitoring aimed at assessing the availability of facilities and equipment in the SCs. While 400 ANMs were covered during Q1 of the survey, 411 ANMs were covered during Q2 making the overall coverage 811.

[6] Indian Public Health Standards (IPHS) for Sub-Centres Guidelines (2010)

The following table provides the summary findings of the Sub Centre facility survey.

Summary findings of Sub-Centre facility survey

	Q1 Obs	Q2 Obs	Q3 Obs	Q4 Obs	Consolidated
% Sub-Centre within village	84.5	95.4	96.5	95.6	92.6
% ANM staying in sub-centre village	51.5	57.4	58.4	51.7	54.7
% sub-centre have designated government building	47.8	49.1	45.1	51.7	48.5
% sub-centre building in very good and good condition	58.1	57.2	68.5	64	61.3
% sub-centre observed to be clean	57.3	58.6	64.7	65.5	61
% sub-centre having toilets	22.7	23.8	27.6	29.7	27.3
% sub-centre having water supply	57.1	43.6	45.8	48.8	49
% sub-centre having electricity supply	49.5	36	39.5	41.1	41.6
% sub-centre having labour room	18.5	19.7	14.7	24.5	19.4
% sub-centre having labour room and conducted deliveries in last 3 months	31.1	13.6	16.7	14.1	18.9
Total ANMs interviewed	**400**	**411**	**286**	**319**	**1416**

3.1 Location of the Sub-Center and Presence of ANM

The consolidated target of coverage on the Sub-Centres and ANM for the first, second and third quarter was 1225. Out of the 1225 Sub-Centre visited, the ANM was found to be present on the day of visit in 1105 Sub-Centres only; in 106 cases ANMs were absent and in 14 cases ANM were not posted. Out of the 1105 ANMs present during the day of visit, 8 ANMs refused to participate in the interview. (Table B.3.1)

Table B.3.1: Coverage of ANMs

Coverage of ANMs	Q1 Coverage Number of ANMs	Q2 Coverage Number of ANMs	Q3 Coverage Number of ANMs	Q4 Coverage Number of ANMs	Consolidated
Target	450	450	325	345	1570
No. of ANMs present on the day of visit	404	413	288	319	1416
No. of ANMs absent on the day of visit	38	33	35	7	113
ANMs not posted in the AWC	8	4	2	8	22
No. of ANMs refused to be interviewed	4	2	2	11	19
Total ANMs interviewed	400	411	286	319	1416

The IPHS mandates location of the sub-center within the village in order to provide easy access to the people and ensure safety of the ANM. It also stipulates the location of the Sub-Center to be

such that no person needs to travel more than 3 Km to reach the Sub-Center and also the Sub-Centre village has some communication and transport facilities for easy accessibility of the people. The Sub-Centre should also be away from garbage collection, cattle shed, water logging areas etc.

It was observed that 92.6 per cent of the sub-centers were located within the village and the remaining outside the village (Table B.3.2).

Table B.3.2: Location of Sub-Centre

Location of Sub Centre	Q1 Observation (% of Sub-centers)	Q 2 Observation (% of Sub-centers)	Q 3 Observation (% of Sub-centers)	Q 4 Observation (% of Sub-centers)	Consolidated
With in the village	84.5	95.4	96.5	95.6	92.6
Away from village locality	15.5	4.6	3.5	4.4	7.4
Total (N)	**400**	**411**	**286**	**319**	**1416**

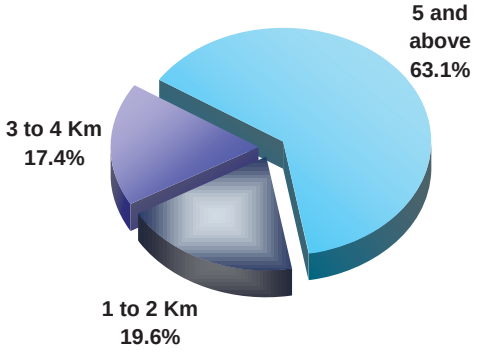
Wherever the Sub-Center has the ANM quarters in its layout it is expected that she stays there else she should stay in a rented house within the Sub-centre village if it is available. However, it was observed that only 54.7 percent of the ANMs stayed in the Sub-Centre village and the remaining outside the village (Table B.3.3).

Table B.3.3: Location of ANM Residence

Location of ANM Residence	Q1 Observation (% of Sub-centers)	Q 2 Observation (% of Sub-centers)	Q 3 Observation (% of Sub-centers)	Q 4 Observation (% of Sub-centers)	Consolidated
ANM staying within Sub-Centre village	51.5	57.4	58.4	51.7	54.7
ANM staying outside Sub-Centre village	48.5	42.6	41.6	48.3	45.3
Total (N)	**400**	**411**	**286**	**319**	**1416**

Of the 45.3 percent ANMs who were staying outside the Sub Centre villages, a good proportion (62%) traveled 5 Km or more to reach the Sub-Centres, about 17 percent traveled between 3 to 4 Km and the rest traveled for 1-2 Km. (Fig. B.3.1).

Fig. B.3.1: Distance of ANM Residence from Sub-Centre



3.2 Condition of the Sub-Centre Building

The IPHS mandates the Sub-Centre to have its own building and in case own building is not available it should function from a rented house located centrally with easy access to population. The lay out should have residential facilities for the ANM.

3.2.1 Place of Functioning

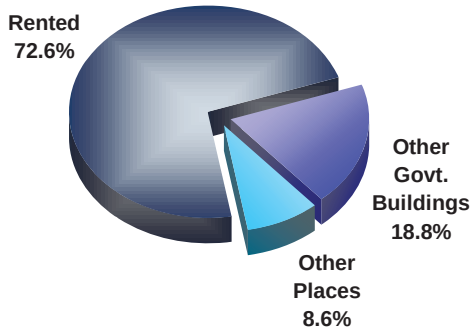
The Q1, Q2 and Q3 observation revealed that slightly more than half of the Sub-Centres operated from either rented or other than designated government buildings. Only 48 per cent of the Sub-Centres had their own designated government buildings (Table B.3.4). There were many sub-centres under construction or unfinished and the contractors had not handed over the sub centers to the department.

Table B.3.4: Place of Functioning of Sub-Centre

Place of functioning of Sub-Centre	Q1 Observation (% of Sub-centers)	Q 2 Observation (% of Sub-centers)	Q 3 Observation (% of Sub-centers)	Q 4 Observation (% of Sub-centers)	Consolidated
Designated government building	47.8	49.1	45.1	51.7	48.5
Other than designated government buildings	52.2	50.9	54.9	48.3	51.5
Total (N)	**400**	**411**	**286**	**319**	**1416**

A majority (72.6%) of the Sub-Centres operating from places other than the designated Government buildings were found to have rented private buildings while 18.8 per cent operated from other Government building such as Panchayat etc. and 8.6 per cent from other places (Fig B.3.2).

Fig. B.3.2: Sub-Centres Operating from Other Places (Q1+Q2+Q3)



3.2.2 Physical Condition of Sub-Centre Buildings

The Sub-Centre building were observed and rated based on the physical condition on a 5-point scale - very good, good, neither good not bad, bad and very bad. Observation during all the quarters revealed that about 7.1 per cent of the buildings were in very good condition while 54.2 percent were on good condition. Around 25 per cent of the Sub-centre buildings' condition was found to be neither good nor bad, and about 14 per cent in very bad/bad condition. (Table B.3.5).

Table B.3.5: Physical Condition of the Sub-Centres

Physical condition of the Sub-Centre building	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Very good	11.8	6.6	4.2	4.4	7.1
Good	46.3	50.6	64.3	59.6	54.2
Neither good nor bad	26.5	25.5	22.4	24.5	24.9
Bad	11.8	15.3	4.9	7.8	10.5
Very bad	3.8	1.9	4.2	3.8	3.3
Total (N)	**400**	**411**	**286**	**319**	**1416**

3.2.3 Cleanliness of the Sub-Centre Buildings

As per the norms, the Sub-Centre should not be located in low water logging area, places where garbage is collected and near or around cattle shed. The Sub-Centre should be kept clean and disinfected.

The field team was trained to observe the cleanliness of the Sub-Centre and were asked to rate the cleanliness on the day of visit on a 3-point scale – Good, Neither good not bad and bad. Cleanliness was observed to be good in nearly 61 percent of the Sub-Centres, in case of 29.1 per cent it was found to be neither good nor bad and about 10 per cent of the Sub-Centres were not clean. (Table B.3.6).

Table B.3.6: Cleanliness of the Sub-Centre (%)

Cleanliness	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Good	57.3	58.6	64.7	65.5	61
Neither good nor bad	32.5	33.3	28	20.4	29.1
Bad	10.3	8	7.3	14.1	9.9
Total (N)	**400**	**411**	**286**	**319**	**1416**

3.2.4 Availability of Toilet in the Sub-Centre and its cleanliness

A large proportion of the Sub-Centres (72.7%) did not have toilets. Only 23 per cent had common toilets and a small proportion (1.1%) cent had separate toilets for men and women. (Table B.3.7).

Table B.3.7: Sub-Centre having Toilets (%)

Sub-Centres having toilets	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Common toilet	21.5	22.1	26.6	36.7	26.1
Separate toilets for men and women	1.3	1.7	1.0	0.3	1.1
No toilet	77.3	76.2	72.4	70.3	72.7

Sub-Centres having toilets	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Total (N)	**400**	**411**	**286**	**319**	**1416**

The toilets were observed by the field team to find out their state of cleanliness. Out of the 386 Sub-Centres where toilets were present, encouragingly more than three-fourths of the Sub-Centres toilets were found to be clean. In the rest the toilets were not clean (Table B.3.8).

Table B.3.8: Cleanliness of Toilets **(%)**

Cleanliness of toilet	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Clean toilets	76.9	74.5	84.8	70.3	75.9
Un clean toilets	24.1	25.5	33	29.7	24.1
Total (N)	**91**	**98**	**79**	**118**	**386**

3.2.5 Availability of Water in Sub-Centre and Source of Water

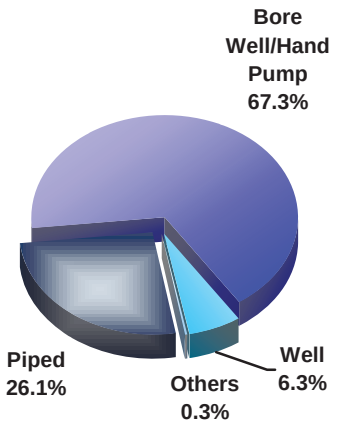
Regular supply of water in the Sub-Centre is a must where Labour room is attached and deliveries are conducted. 51 percent of the Sub-centres were found to have no water supply. In 24.9 per cent of the Sub-Centres water supply was observed for 24 hours whereas in 13.8 per cent cases water supply was found to be available at regular interval and in 10.3 per cent cases the supply of water was irregular (Table B.3.9)

Table B.3.9: Availability of Water

Availability of water	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
24 X 7 water supply	34.8	24.6	17.5	19.4	24.9
Water supply at regular interval	14.8	8.3	14.3	19.4	13.8
Irregular water supply	7.5	10.7	14.0	10	10.3
No water supply	43	56.4	54.2	51.1	51
Total (N)	**400**	**411**	**286**	**319**	**1416**

The major source of water for over three-fifths of the Sub-Centres was hand pump or bore well. 26.1 per cent Sub-Centre had piped water connection while 6.3 per cent depended on well. A miniscule proportion (0.4%) also procured water from other sources (Fig. B.3.2).

Fig. B.3.2: Sources of Water (Q1 +Q2+Q3)



3.2.6 Availability of Electricity in Sub-Centre

In 58.3 per cent of the sub-centre there was no electricity supply. Only 26.6 per cent Sub-Centre had a steady supply of electricity i.e. for 24 hours a day. Another 15 per cent of the Sub-Centre was found to have intermittent and staggering electricity supply. (Table B.3.10).

Table B.3.10: Availability of Electricity (%)

Availability of electricity	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Yes 24 X 7 electricity supply	34.3	25.3	22.4	22.6	26.6
Intermittent and staggering electricity supply	15.3	10.7	17.1	18.5	15
No electricity supply	50.5	64	60.5	58.9	58.3
Total (N)	**400**	**411**	**286**	**319**	**1416**

3.2.7 Availability of Telephone and Mobile Phone

As mentioned earlier the Sub-Centre is the first port of contact between the Primary Health System and the community. It is important that the information from the sub-centres should quickly reach other higher facilities for prompt action. This warrants an effective communication system between the Sub-Centres and the higher health facilities. An attempt was made to assess the availability of telephone and mobile communication systems in the Sub-Centres. It was found that most of the Sub-Centres (91.5%) had mobile phone (SIM Card) facilities while 4.9 percent had land lines and rest 3.6 percent had neither mobile phone (SIM card) nor landline (Table 3.11).

Table B.3.11: Availability of Telephone and Mobile Phone (%)

Availability of Telephone	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Telephone facility	8.5	4.9	2.8	2.2	4.9
Mobile phone (SIM card)	91.5	91.5	93.0	90.3	91.5
Not available	-	3.6	4.2	7.5	3.6
Total (N)	**400**	**411**	**286**	**319**	**1416**

3.2.8 Availability of Labour Room

Some of the Sub-Centres have attached labour room to conduct deliveries. In the Sub Centres that were visited by the field teams in Q1, Q2, Q3 and Q4, only 19.4 percent had a labour room (Table B.3.12).

Table B.3.12: Availability of Labour Room in the Sub-Centre (%)

Labour room available at the Sub Centre	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Labour room available at the SC	18.5	19.7	14.7	24.5	19.4
Labour Room not available	81.5	80.3	85.3	75.5	80.6
Total (N)	**400**	**411**	**286**	**319**	**1416**

However, not in all the Sub Centres which had Labour room deliveries were being conducted. Of the 275 Sub Centres which had Labour room, only in 18.9 per cent Sub-Centres deliveries were conducted (Table B.3.13).

Table B.3.13 Sub-Centres Conducting Deliveries (%)

Sub Centres conducting deliveries	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Delivery undertaken in last 3 months	31.1	13.6	16.7	14.1	18.9
Delivery not conducted	68.9	86.4	83.3	85.9	81.1
Total (N)	**74**	**81**	**42**	**78**	**275**

3.2.9 Availability of Equipment and Medicines in Sub-Centres where deliveries are conducted

A fully equipped and operational labour room at the Sub-Centre should have the following as per the Indian Public Health Standards:

- A labour table with Mattress, pillow and Kelly's pad
- McIntosh Sheet
- Suction machine
- Facility for oxygen administration
- Sterilization equipment
- 24-hour running water
- Electricity supply with back-up facility (generator)
- Attached toilet facilities
- Newborn corner
- Emergency drug tray: This must have the following drugs for emergency obstetric management before referral
    - Inj. Oxytocin
    - Inj. Magnesium sulphate
    - Inj. Methyl ergometrine maleate
- Delivery kits, including those for normal delivery and assisted deliveries.

As mentioned earlier, only 52 Sub-Centres were found to be conducting deliveries out of the 275 Sub-Centres which had attached labour room as per the consolidated status of Q 1, Q 2, Q3 and Q4. Of these 52 Sub-Centre, more than half of the Sub-Centres had labour table with mattress, pillow & kelley's pad, MacIntosh sheet, 24- hour running water, attached toilet facilities, emergency drug tray (Inj. Oxytocin, Inj. Magnesium sulphate, Inj. Methyl ergometrine maleate), and delivery kits (normal / assisted deliveries). However, equipment and facilities as important as suction machine, oxygen administration, sterilization equipment, electricity supply with back-up facility (generator) was available only in 4-16 Sub Centres. (Table B.3.14).

Table B.3.14: Equipment Available for Labour Room in SCs Conducting Delivery
(Numbers)

Availability of equipment in Labour room	Q1 Obs	Q2 Obs	Q3 Obs	Q4 Obs	Consolidated
Labour table with mattress, pillow & kelley's pad	14	7	5	10	36
MacIntosh sheet	17	6	6	8	37
Suction machine	8	3	5	7	23
Facility for oxygen administration	4	0	3	2	9
Sterilization equipment	10	6	6	8	30
24- hour running water	15	3	3	4	25
Electricity supply with back-up facility (generator with POL)	10	4	3	5	22
Attached toilet facilities	15	5	3	5	28
Newborn Corner	6	3	1	6	16
Emergency drug tray (Inj. Oxytocin, Inj. Magnesium sulphate, Inj. Methyl ergometrine maleate)	15	5	3	7	30
Delivery kits (normal / assisted deliveries)	19	8	5	8	40
Total (N)	23	11	7	11	52

The Sub-Centres are expected to have certain equipment and materials in order to render its preventive, promotive and curative services. The consolidated status of Q1, Q2, Q3 and Q4 sub-centres indicated that equipment/material like Foetoscope, Ambubag (pediatric size) with baby mask Talquist Hb scale and Room heater / cooler with electrical fitting for immunization clinic were found in less than 50 per cent of the Sub Centres (ranged 10-48%); Dressing drum with cover, Hemoglobinometer set, Salter weighing scale for baby, Sterilizer and Measuring tape were found in Sub Centres ranging between 56.1 per cent to 79 per cent. The equipment/material available in more than 80 per cent of the Sub Centres were weighing scale for adult/infant, BP instrument, Stethoscope, HUB cutter and Vaccine carrier.(Table B.3.15).

Table B.3.15: Equipment Available in the Sub-Centre (%)

Equipment and Materials	Q1 Obs	Q2 Obs	Q3 Obs	Q4 Obs	Consolidated
Dressing drum with cover	49.3	54.7	61.5	61.4	56.1
Hemoglobinometer set	77.8	79.3	81.8	80.3	79.6

Equipment and Materials	Q1 Obs	Q2 Obs	Q3 Obs	Q4 Obs	Consolidated
Weighing scale for adult	83.8	83.5	89.5	90.9	86.5
Weighing scale for infant	85.3	75.9	88.5	82.8	82.7
Salter weighing scale for baby	72	64.5	58	65.5	65.5
BP instrument	82.3	84.7	85.7	87.1	84.8
Sterilizer	56.3	52.1	64	68.7	59.4
Foetoscope	52	42.3	51.7	56.7	50.2
Stethoscope	82.3	92.9	96.5	93.7	90.8
Ambubag (pediatric size) with baby mask	19.3	15.1	11.2	11.9	14.8
Measuring tape	58.8	55.0	70.6	69	62.4
Talquist Hb scale	34	32.4	30.1	36.7	33.4
HUB cutter	81.3	86.4	84.6	88.7	85.1
Vaccine carrier	85.3	93.4	98.6	97.5	93.1
Room heater / cooler with electrical fitting for immunization clinic	15	5.8	7	9.7	9.5
Total (N)	**400**	**411**	**286**	**319**	**1416**

The Indian Public Health Standards recommends certain drugs to be available with the Sub-Centre for prophylaxis and therapeutic treatment of diseases. The drugs recommended for Kit A of the Sub-Centre include, Oral Rehydration Salts, Iron & Folic Acid, Folic Acid Tablets IP Folic Acid IP, Trimethoprim &Sulphamethoxazole, GV Crystals (Methylrosanilinium Chloride BP), Zinc Sulphate and Water – Miscible Vitamin Concentrate IP Vitamin A Syrup.

In the Sub-Centres the team observed the availability of all the recommended drugs for Kit A. Except for Trimethoprim & Sulphamethoxazole tablets, GV crystals and Zinc Sulphate, which were available only in 15 to 38 percent of the Sub Centres, rest of the drugs were available in 53 to 85 per cent of the Sub Centres. (Table B.3.16).

Table B.3.16: Availability of drugs in Kit A (%)

Availability of drugs in Kit-A	Q1 Obs	Q2 Obs	Q3 Obs	Q4 Obs	Consolidated
Oral Rehyderation Salts IP	83.8	83.0	86.4	81.5	83.5
IFA tablets large	82.5	66.2	57.3	56.7	66.9
IFA tables small	75.8	52.1	39.2	21	49.2
Folic Acid tablets IP	76.3	60.6	49	33.5	56.6
Trimethoprim & Sulphamethoxazole tablets IP	41.5	25.1	26.9	12.2	27.2
GV crystals	23.3	10.5	8.4	5.6	12.6
Zinc Sulphate dispersible	48.8	36.5	24.5	8.8	31.3
IFA syrup	75.3	46.0	31.8	35.1	48.9

Availability of drugs in Kit-A	Q1 Obs	Q2 Obs	Q3 Obs	Q4 Obs	Consolidated
Water miscible (Vit-A syrup)	86.3	84.4	85	79	83.8
Total (N)	**400**	**411**	**286**	**319**	**1416**

Similarly, the IPHS recommends certain drugs for Kit B to be available in the Sub Centres. It was observed that a significant proportion of Sub-Centres had no stocks of Methylegrometrium tab, Methylegrometrium injection, Albendazole tab, Dicyclomine tab, Povidone Iodine Ointment, Chloramphenicole eye ointment. (Table B.3.17)

Table B.3.17: Availability of drugs in Kit B (%)

Availability of drugs in Kit B	Q1 Obs	Q2 Obs	Q3 Obs	Q4 Obs	TOTAL
Methylegrometrium tab IP	57.5	50.4	42	31	46.3
Paracetamol tab (%)	73.3	79.1	79	71.8	75.8
Methylegrometrium injection (%)	43.3	28.0	19.2	9.1	26.3
Albendazole tab IP (%)	73.8	74.0	75.5	67.7	72.8
Dicyclomine tab IP (%)	53.0	42.6	39.5	25.7	41.1
Chloramphenicole eye oint. IP (%)	49.0	31.4	22.7	12.9	30.4
Povidone Iodine Oint. USP (%)	55.5	42.3	40.2	30.1	42.9
Cotton bandage (%)	87.8	85.9	88.1	71.8	83.7
Absorbent cotton IP (%)	72.3	61.3	64.7	48	62.1
Total (N)	**400**	**411**	**286**	**319**	**1416**

3.2.10 Perception on the Services of the Sub-Centre

An attempt was made to find out the perception of the women on the sub-centre and its services during the household survey carried out during Q 1, Q 2, Q3 and Q4.

Opinion of women on various aspects of the sub-centre was collected. It was found that major areas of concern were unavailability of the staff and inadequate stock supplies. Around 55 to 62 per cent women said that the Sub-Centre staff is always available and only around one-third reported that the stock/supply is adequate.

The women found the staff very friendly and well behaved. Around 89 per cent of the women reported that staff in the sub-centre is well behaved and friendly. The respondents were asked to give their overall satisfaction levels on the Sub-Centre. It was found that around 76-78 per cent each of lactating mothers, pregnant women and mothers of 6-59 months contacted during Q 1, Q 2, Q3 and Q4 were satisfied with the overall performance of the Sub-Centre (Table B3.18).

Table B.3.17: Perception of Women on the Services of the Sub-Centres (%)

	Particulars	Staff are available 24 X 7	Sub-center is well equipped	Staff are friendly and well behaved	The staff are well qualified	Quick services are provided	The stock/supply is adequate	Satisfied with performance
Q1 Observation	**Lactating women**	43.4	60	83.2	69.9	54.6	35.5	63.7
	Pregnant women	39.7	58.9	81.2	63.5	50.2	36.1	64.3
	Mothers of 6-59 months	41.4	60	80.5	68.3	53.5	35.3	63.5
Q2 Observation	**Lactating women**	58.3	75.1	93.9	84.4	62	28.7	80.7
	Pregnant women	48.3	72.2	94.8	80.9	62.3	23.6	79.2
	Mothers of 6-59 months	50.4	73.8	92.8	83.7	65.3	30	81.1
Q3 Observation	**Lactating women**	50.2	66.3	87.6	76	56.8	31.6	74.2
	Pregnant women	67.4	72.6	95.8	88.3	55.4	26.4	73
	Mothers of 6-59 months	70.2	75	93	86	55.9	27.9	77.2
Q4 Observation	**Lactating women**	79.9	90.5	90.5	91.8	69.3	34.5	87.6
	Pregnant women	75.8	89.3	89.6	93.3	63.2	3.2	86.2
	Mothers of 6-59 months	77	90.8	90.1	93	66.6	34.5	86.3
Consolidated	**Lactating women**	61.5	74.2	89.1	82.3	59.7	31.8	76.9
	Pregnant women	55.2	71.7	89.4	78.4	57.2	29.9	76.2
	Mothers of 6-59 months	58	74	88.6	81.8	60.2	32.2	78

Summary

A majority of the Sub-Centres were located inside the villages. However, the same was not true with regard to residence of the ANM. In nearly half of the Sub-Centres the ANMs were staying outside the villages and a good proportion of them stayed more than 5 km away from the sub-centre. Around 49 per cent of the Sub-Centres had their own designated buildings and rest were working from other than designated government buildings. More than half of the buildings were in good condition and also maintained clean environs. However, when it came to basic facilities like availability of water and toilets, nearly half of the sub-centres had irregular or no water supply; and 73 percent of the Sub-centres did not have toilets. Similar was the situation of electricity supply with more than half not having electricity supply. Encouragingly most of the Sub-Centres either had mobile connection or had land lines.

With regard to the medical facilities like a Labour room, only 19.4 per cent of the Sub Centres had this facility and of these only in 18.9 per cent deliveries were conducted in last three months. Not all of these Sub-Centres which conducted deliveries were equipped with essential equipment, emergency drug tray and material for conducting deliveries. Among the other equipment and materials to carry out preventive and curative services, weighing scale for adult/infant, BP instrument, Stethoscope, HUB cutter and Vaccine carrier was found in more than 80 per cent of the Sub Centres. With regard to the availability of all the recommended drugs for Kit A, except for Trimethoprim & Sulphamethoxazole tablets, GV crystals and Zinc Sulphate, all other drugs were available in more than three-fifths of the Sub-Centres. Similarly, with regard to drugs for Kit B, a significant proportion of Sub-Centres had no stocks of Methylegrometrium tab, Methylegrometrium injection, Albendazole tab, Dicyclomine tab, Povidone Iodine Ointment, Chloramphenicole eye ointment.

4.0 Role and Responsibilities of Gaon Kalyan Samiti (GKS) in Health and Nutrition Services

Gaon Kalyan Samiti (GKS), earlier known as Village Health and Sanitation Committee (VHSC) is constituted at revenue village and comprises of representatives of the villages coming under the revenue village. Under GKS, priority is given to the women ward members to head the GKS. Following are the members who constitute GKS:

- Ward Members
- AWW
- ASHA
- Self Employed Mechanics of Rural Water Supply and Sanitation of the area
- President or Secretary of SHGs
- President of Watershed Development Committee (if president is residing in the village)
- One member each from the SC and ST communities if none of the above mentioned individuals are from SC or ST community.
- Representative of any NGO

The GKS is expected to play a myriad of roles and undertake different responsibilities by involving the communities. These roles are:

- Planning and implementation of health and other allied activities at the village level
- Create awareness on child health services, maternal health services, family planning services, adolescent health services, health and hygiene, environmental sanitation etc.
- Initiate action for the management of health, related issues and problems at local level.

To carry out the above activities the GKS receives a grant of Rs. 10,000 as untied fund for Health and Family Welfare Department. This untied fund is provided to enable local action and to ensure that the public health activities at the village level receive priority.

In order to assess the GKS activities, the field teams interviewed any one member of the committee. Apart from the GKS member, the visibility of GKS and their activities was also assessed by speaking to the beneficiaries like lactating mothers and mothers having children in the age group of 6 to 71 months. Since GKS has been conceptualized to play an important role in generating local action for various health, nutrition and water and sanitation related activities, it was also important to speak to service providers like the AWWs and ANMs from their feedback on GKS.

In all members of 681 GKS were covered during Q1, 687 GKS during Q2 and 475 during Q3. The table below presents a summary of the findings of GKS.

Summary Findings of Gaon Kalyan Samiti

Indicators	Q1 Obs	Q2 Obs	Q3 Obs	Q4 Obs	Consolidated
% Village where GKS have formed	86.9	84.4	84.2	87	85.6
% Mothers (0 to 6 months children) aware about GKS	22	26	22.7	24.1	23.6
% Mothers (6 to 71 months children) aware about GKS	25	30	23.4	26.6	26.4
% ANM reporting to have received some support from the GKS members	89	89	91.3	91	89.9
% AWW reporting to have received some support from the GKS members	79	80	79.3	80.4	79.6
% GKS undertaken activities related to Health	46	36	47	42.6	42.5
% GKS undertaken activities related to Nutrition	27	20	27	19.9	23.4
% GKS undertaken activities related to Water and Sanitation	70	57	62	56.5	61.6
Total GKS observed	**681**	**687**	**458**	**568**	**2394**

4.1 Formation of GKS

As mentioned earlier, GKS plays an important role in ensuring health, nutrition and water and sanitation services to the community. As per the consolidated findings from all the quarters, GKS was found to have been formed in 85.6 per cent villages while in 14.4 per cent villages GKS was not formed (Table B.4.1).

Table B.4.1: Formation of GKS in the Village (%)

Formation of GKS	Q1 Obs (% of villages)	Q2 obs (% of villages)	Q3 obse (% of villages)	Q4 obse (% of villages)	Consolidated (% of villages)
GKS Formed	86.9	84.4	84.2	87	85.6
GKS Not Formed	13.1	15.6	15.8	13	14.8
Total	**900**	**900**	**475**	**653**	**2928**

4.2 Visibility of GKS in the Village

As mentioned above, GKS was formed to ensure that the provisions of services in health, nutrition, water and sanitation reach the community. In order to assess how GKS ensures provision of these services, an attempt was made to analyze information obtained from AWCs, ANMs and beneficiaries (lactating mothers and mothers of 6 to 71 months) regarding their awareness of GKS and support that they have received from the committee.

As per the consolidated findings from Q1, Q2, Q3 and Q4, the visibility of the GKS was found to be very low among the lactating mothers (23.6%) and mothers of children aged 6-71 months (26.4%). Low visibility was also evident from the fact that 67.3-71.4 per cent of the mothers (6 to 71 months) and lactating mothers reported to have not received any support from GKS. Over one-tenth of both the categories of women reported that GKS has ensured ASHA accompanying them during the visit of women to hospital for delivery (Table B.4.2). The other areas of support provided by GKS were arrangement of transport, financial support, ensuring regular ANC check up by ANM / AWW and ensuring regular supply of SNP from AWC (3.4% to 17.6%).

Table B.4.2 Awareness of Women about GKS and Support Received from GKS (%)

Particulars	Q1		Q2		Q3		Q4		Consolidated	
	Lactating Women*	Mothers of 6-36 Months Children*	Lactating Women*	Mothers of 6-36 Months Children*	Lactating Women*	Mothers of 6-36 Months Children*	Lactating Women*	Mothers of 6-36 Months Children*	Lactating Women*	Mothers of 6-36 Months Children*
% Aware about GKS	21.9	24.4	25.5	30.3	22.7	23.4	24.1	26.6	23.6	26.4
Total N	2365	4438	2329	4497	1673	3249	1833	3406	8200	15590
Type of Support Received from GKS										
Transport arrangement	8.5	7.3	16.3	20.2	18.1	19.6	16.3	24.3	14.3	17.6
Financial support	7.4	6.4	10.1	13	18.6	15.7	13.5	15.8	11.5	12.4
Ensure regular ANC by monitoring ANM/AWW	5.8	6	7	9	9	8	11.3	12.6	7.9	8.8
Ensure that ASHA accompany to hospital	12.1	11.1	11.5	14.7	11.6	12.8	12.8	16.4	12	13.8
Ensure regular SNP from AWC	4	6.4	6.1	8.7	6	7.6	3.6	4.6	5	7
Ensure regularity in supply of food from other food security programmes	2.9	4	4.2	5.9	5.6	8	0.8	0.9	3.4	4.7
No support	78.6	79.4	69.6	64.3	65	62.8	69.5	61.1	71.4	67.3
Others	2.7	1.2	2	0.8	3.5	1.1	0.5	1.2	2.2	1
Total	929	1085	594	1363	569	759	609	905	3070	4112

* Source: Schedule for lactating mothers and mothers of children (6-71 months)

In case of the service providers, visibility of GKS was high. A high proportion of ANM (90%) and AWWs (80%) reported that they are getting good support from the GKS in carrying out activities (Table B.4.3).

Table B.4.3 Support provided by GKS to the Service Providers (%)

Respondents	Q1 Obs		Q2 Obs		Q3 Obs	Q4 Obs		Consolidated	
	%	N	%	N	%	%	N	%	N
ANM getting support from the GKS in executing your duties**	89.3	400	88.8	411	91.3	91	289	89.8	1416
AWW getting support from the GKS in executing your duties**	78.6	1232	80.1	1293	79.3	80.4	797	79.6	4401

** ANM and AWW schedule

4.3 Activities undertaken by GKS in last 3 months

In order to find out their involvement in various health, nutrition and water and sanitation related activities GKS members were asked whether they participated in any activities to ensure improvement in health, nutrition and water and sanitation of the village. It was noted that the GKS has focused more on the water and sanitation related activities. Involvement of GKS in nutrition and health services had been considerably low. Only 23.4 per cent of GKS reported to have participated in activities related to nutrition and about 43 per cent reported their participation in health related services.

Table B.4.4: Activities Undertaken by GKS in last 3 Months (%)

Activities undertaken by GKS in last three months	Q1 Observation (% of GKS)	Q2 Observation (% of GKS)	Q3 Observation (% of GKS)	Q4 Observation (% of GKS)	Consolidated
Health	46.0	35.8	47.4	42.6	42.5
Nutrition	27.3	19.9	27.1	19.9	23.4
Water and Sanitation	70.0	57.4	61.8	56.5	61.6
Total (N)	**681**	**687**	**458**	**568**	**2394**

4.4 Utilization of Untied Fund

As mentioned earlier, the health and Family Welfare Department provides Rs. 10,000/- annually as an untied fund per GKS for local action in health, nutrition and water and sanitation. An effort was made to find out from the GKS members regarding the activities where this untied fund was utilized. It was found that the fund was used in a number of activities. Majorly these activities were, cleaning the surroundings of the village tube well (60.9%), supporting treatment of poor and needy (47.8%), cleaning the wells (42.8%) and organizing transport for health emergency (36.4%).

Table B.4.5: Utilization of Untied Funds

(%)

Utilization of untied funds	Q1 Obs	Q2 Obs	Q3 Obs	Q4 Obs	Consolidated
Supporting treatment of poor and needy	52.4	45.4	44.1	48.1	47.8
Cleaning the surrounding of the village	37.4	68.3	69	73.6	60.9

Utilization of untied funds	Q1 Obs	Q2 Obs	Q3 Obs	Q4 Obs	Consolidated
tube well					
Cleaning the wells	33.9	47.3	44.8	46.5	42.8
Organizing transport for health emergency	32.9	33.9	39.5	41	36.4
DDT Spray	21.7	33.6	38.9	39.1	32.5
Infrastructure in AWC	18.6	36.1	46.3	32.7	32.3
Procurement of furniture	14.4	13.7	11.4	15.8	14
Infrastructure in Sub-center	7.5	7.3	6.8	1.6	5.9
Cleaning temple premises	7.0	9.5	9.2	7.9	8.4
Infrastructure in PHC	6.2	4.7	6.1	1.4	4.6
Constructing school boundary	4.3	11.6	10.5	12	9.4
Procurement of bicycles for ASHA and AWW	2.2	3.6	3.3	3.5	3.1
Any other(s)	18.5	22.4	22.5	24.5	21.8
Total (N)	**681**	**687**	**458**	**658**	**2394**

Summary

GKS have been formed in many villages (85%); however, there are some villages where GKS is yet to be formed. Visibility of GKS among lactating mothers, pregnant women and Mothers of children 6 to 59 months was found to be very low. A high proportion of the women reported that they did not receive any support from the GKS. However, among the service providers, visibility of GKS was good. Majority of the GKS reported to have undertaken activities in water and sanitation followed by Nutrition and Health. Major portion of the untied fund available with the GKS was spent in cleaning water sources or supporting treatment of poor and needy.

5.0 Mamata Diwas – Bridge Between the Health and Nutrition Village Level Services

Village Health and Nutrition Day (VHND) also called 'Mamata Diwas' is a concept for convergence of Health and Nutrition services for desirable health outcomes of children below five years. This was introduced in the state of Odisha by the Department of Health and Family Welfare. Under the programme, the primary clients are pregnant women, lactating mothers, children below five years and adolescent girls. Basic components of primary health care services, including early registration, de-worming, counseling on early breastfeeding, identification and referral of high risk cases of children and pregnant women, as well as basic ANC and PNC care are provided at community level in order to address the essential requirements of pregnancy, delivery, referral, childhood illnesses and adolescent health.

Mamata Diwas is organized once in every month in each AWC on a fixed day (either Tuesday or Friday) where malnourished children, pregnant women and lactating mothers are identified and referred to the PHC on a fixed called Pustikar Divas for treatment. In Mamata Diwas pregnant women, lactating mothers and mothers of severely malnourished children are counseled on appropriate nutrition and care. Primarily Mamata Diwas is being organized with the following objectives[7]:

[7] Mamata Diwas (Village Health and Nutrition Day Operational Guidelines), Ministry of Health and Family Welfare, Odisha

- To provide essential and comprehensive health & nutrition services to pregnant women, lactating mothers, children (0-5 yrs) and adolescent girls.
- To ensure early registration, identification and referral of high risk children and pregnant women.
- To provide an effective platform for interaction of service providers and the community (through GKS or the mothers group)
- To provide information to families on care of mothers and children at the household and community level through discussion of various health topics (as envisaged in the Health Calendar); and
- To ensure establishment of linkage between health & ICDS as to promote maternal & child survival programmes

Certain activities have been chalked out to make the Mamata Diwas effective and successful in addressing its objectives. Basic information on the Mamata Diwas needs to be displayed prominently in the AWC in order to make the beneficiaries aware about the event. The ASHA workers and AWW are responsible for spreading the information with the help of GKS. Both the ANM and AWWs are responsible for organizing the Mamata Diwas. Mamata Diwas mandates the presence of ANM, Health Workers Male, AWWs all through out the event while MO /AYUSH MO / BEE /CDPO / ICDS Supervisors participate in it to provide supportive supervision.

The subsequent sections discuss the findings of the first quarter spanning three months of the study. The observation of the Mamata Diwas has been done against its operational frame work and the list of logistics laid down in its operational guidelines. Issues related to various important components of Mamata Diwas have been discussed in the ensuing paragraphs.

5.1 Observation of Mamata Diwas

The field team visited 245 AWC on the stipulated date of Mamata Diwas. Out of 245 AWCs visited, Mamata Diwas was organized only in 70.2 percent of the AWCs. In the remaining AWCs, Mamta Diwas was not organized due to various reasons such as AWW was unwell; she had gone for meeting etc. (Table B.5.1).

Table B.5.1: Number of Mamata Diwas visited

Observation of Mamata Diwas	Q1 Obs	Q2 Obs	Q3 Obs	Q4 Obs	Consolidated
Mamata Diwas observed	80.3	86.2	84.5	70.2	84.5
Mamata Diwas not observed	19.7	13.8	15.5	29.8	15.5
Total	**122**	**298**	**189**	**245**	**854**

5.2 Participation of Providers and Beneficiaries

As mentioned earlier, presence of ANM, AWW, and Heath Workers (Male) is a must in Mamata Diwas. In this context, it was observed that AWWs and ANMs were present in 97 and 98 per cent of the Mamata Diwas observed respectively. As regards the presence of supervisory level of functionaries, the ICDS supervisor was present in 7 per cent and LHV was present in 7 per cent of the Mamta Diwas observed. Participation of senior ICDS officials in the events was very low in all the three quarters. (Table B.5.2).

Referral of cases: Women and children were referred to Pustikar Diwas and other higher centers for better treatment in some of the AWCs where Mamata Diwas was observed. It was observed that in majority of these Mamta Diwas, women were properly counseled while being referred to higher centers.

Table B.5.2: Participation of Services Providers during Mamata Diwas (%)

Participation of Service Providers	Q1 Obs	Q2 Obs	Q3 Obs	Q4 Obs	Consolidated
AWW	95.4	92.6	91.3	97.1	93.9
ANM	90.8	98.8	97.5	97.7	97.1
ICDS-Supervisor	15.3	6.7	3.1	7.0	7.2
LHV	9.2	4.7	3.1	7.0	5.5
BEE/BPO	1	.4	1.3	1.2	0.9
Medical Officer	2	.4	1.3	2.3	1.3
Total (N)	**98**	**257**	**160**	**172**	**687**

As per the operational guideline the following services are to be provided in the AWC during Mamata Diwas with the help of ANM and other health functionaries:

Pregnant Women

- Registration of Pregnant Women
- Quality ANC (Weighing, BP, Hb, urine examination, abdominal check up, IFA and T.T) services

Lactating Mothers

- Quality PNC (Counseling and distribution of family planning aids, referral for IUD insertion; counseling on promotion of breastfeeding & on birth registration)
- Identification of danger signs (fever, bleeding and abdominal pain) and referral
- Weighing of newborn; identification of danger signs (fever, rapid breathing, and skin eruptions) and referral

Children 0 to 5 yrs

- Growth monitoring (weighing of children and plotting), Mid Upper Arm Circumference (MUAC)
- Counseling of parents for growth promotion through MAA O SISHU SURAKHYA
- CARD
- Cooking and preparation of food for children 6-12 months, using locally available food ingredients
- IFA supplementation of children (six months to two years: liquid IFA)

Adolescent health

- TTs at 10 and 16 yrs; weekly IFA; half-yearly de-worming

Management of common illnesses

- Identification of cases of disability, malnutrition, anemia, high risk pregnancy, TB,
- Malaria, Leprosy, Kala azar, problems of weaker sections
- Treatment of minor ailments of children using IMNCI / other treatment protocols.
- Treatment of minor ailments for adolescent girls, lactating mothers and pregnant women

As mentioned in the above list of services, the beneficiaries of Mamata Diwas are all the members of the community. However, the primary focus is on 0-5 years of children, pregnant women, nursing mothers, and adolescent girls.

Women and children were observed to be attending the Mamata Diwas in good numbers in most of the villages where the event was held. More importantly, women and children from tag[8] villages, vulnerable communities like scheduled caste/ scheduled tribes and other backward classes and also those from below the poverty line were observed to be participating actively in most of these events across districts indicating awareness and positive perception regarding Mamata Diwas among the community. During Q3 more than one-fifth of the AWCs where Mamata Diwas was observed were found to have tag villages. In majority of the cases there was participation of women and children from the tag villages.

5.2.1 Community Participation

Participation of Community Groups

It was observed that only in about half of the Mamata Diwas observed, community groups like Self Help Groups (SHGs), Gaon Kalyan Samiti (GKS), women groups, etc. participated in the events. Although the participation was seen only in half of the Mamata Diwas events, discussions with AWWs and ANMs revealed that these groups have been helpful to a large extent in motivating people to attend Mamata Diwas.

Participation of Beneficiaries

In Q4, 179 new cases of pregnant women were registered on the day of Mamata Diwas observation in all the 160 AWCs. Overall, it was observed that 823 pregnant women received ANC, 387 nursing mother received PNC and 25 women were identified with danger signs during pregnancy. Services rendered to children were mostly related to growth monitoring and nutrition. During the Mamata Diwas 4226 children were weighed and MUAC measurement was done in case of 180 children. Around 100 children were referred to Pustikar Divas for treatment. IFA tables were distributed to 120 Children and 192 adolescent girls. Counseling on cooking of food for 6 to 12 months children was provided to 542 mothers, 470 parents counseled on '*Maa O Shishu Surakshaya'* Card and 352 couple counseled on alternate family planning methods. TT doses were provided to 62 adolescent girls while de-worming tablets were distributed to 176 adolescent girls. Treatment of minor ailments was given to 447 beneficiaries during Q4.

Table: B.5.3. Participation of Beneficiaries during Mamata Diwas

	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Services Provided	**N**	**N**	**N**	**N**	**N**
Pregnant women registration	153	269	127	179	728
ANC of pregnant women	380	1062	636	823	2901

[8] Tag village is located far from the main village and receives all the ICDS related services from the main village.

PNC of nursing mother	191	741	420	387	1739
Women identified with danger signs during pregnancy	99	138	17	25	279
Children weighed	2530	6382	3890	4226	17028
MUAC measurement of children	182	690	142	180	1194
Children referred	100	204	77	100	481
Children provided IFA	270	378	125	120	893
Parent counseled on Maa O Shishu Surakshaya Card	252	879	247	470	1848
Mother counseled on cooking food for 6 to 12 months children	469	982	442	542	2435
Adolescent girls provided TT doses	309	351	78	62	800
Adolescent girls provided IFA tablets	507	1589	279	192	2567
Adolescent girls provided de-worming tablets	214	548	174	176	1112
Minor ailments treatment	538	780	418	447	2183
Couple counseled on alternative methods of family planning	376	595	291	352	1714
Total (N)	**98**	**257**	**160**	**172**	**687**

5.3 Availability of Equipment, Drugs and Prophylaxes during Mamata Diwas

As per the operational guidelines of Mamata Diwas, the following equipment are necessary for identification of patient for referrals:

- Weighing Machine Adult / Child
- Examination Table / Cot
- Bed Screen / Curtain
- Haemoglobinometer / Talquist paper (if available)
- Uristix for urine examination
- Stethoscope, Foetal Stethoscope & BP Instrument.
- Measurement Tape; MUAC tape
- Oral Pills / Condoms
- Items required for demonstration of feeding practices of 6-12 months children:
- IEC / BCC Materials
- IFA Small / Large, Liquid IFA, IMNCI drugs, ORS and common medicines for minor ailments

The observation during Q4 was similar to that of the earlier quarters with regard to the availability of the basic equipment in the AWC during Mamata Diwas. It was observed that some basic equipment were not available in some of the AWC during Mamata Diwas. Weighing scale for baby and adults were available in 92 percent and 96 percent Mamata Diwas events respectively. Examination cot and bed screen or curtains were available only in 32 percent and 17 percent of AWCs respectively. Hemoglobinometer was available only in 63 percent AWCs during Mamata Diwas. Similarly, stethoscope and foetal stethoscope was available in 84 percent and 22 percent of Mamta Diwas respectively. BCC materials for demonstration of feeding practices were available only in 24 percent AWC on the Mamata Diwas day. (Table B.5.4).

Table: B.5.4. Availability of Equipment during Mamata Diwas

Equipment	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Baby weighing scale	95.9	94.9	95	92.4	94.5
Adult weighing machine	93.9	95.7	94.4	95.9	95.2
Examination table/ cot	44.9	36.2	40.6	32.0	37.4
Bed screen/ curtain	26.5	19.8	13.1	16.9	18.5
Haemoglobinometer	36.7	53.3	56.9	63.4	54.3
Stethoscope	69.4	82.9	88.8	84.3	82.7
Foetal Stethoscope	26.5	32.7	16.9	21.5	25.3
BP instrument	72.4	80.2	85	84.9	81.4
IEC/ BCC material for demo of feeding practices	44.9	24.1	17.5	23.3	25.3
Total (N)	**98**	**257**	**160**	**172**	**687**

An attempt was made to find out the functionality of the essential equipment. It was found that 46 percent of the hemoglobinometer available were not functional; 20 percent of the stethoscope and over 80 percent foetal stethoscope were defunct. In case of the weight measurement instruments like the baby weighing scale and adult weighing machine 92 per cent and 96 per cent were functional. Around 80 per cent of the BP measuring instruments were found to be in working condition (Table B.5.4)

Table: B.5.4. Functional Status of Equipment during Mamata Diwas

Equipment	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Baby weighing scale	94.7	95.5	99.3	92.4	94.3
Adult weighing machine	97.8	98	97.4	95.9	96.0
Haemoglobinometer	80.6	84.7	79.1	53.5	61.2
Stethoscope	88.2	96.2	95.1	80.2	87.8

Equipment	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Foetal Stethoscope	80.8	89.3	74.1	18.6	33.5
BP instrument	98.6	91.7	93.4	79.7	85.9
Total (N)	**98**	**257**	**160**	**172**	**687**

It is also recommended by the operational guidelines that certain medicine must be available during Mamata Diwas for preventive, promotive and curative care of the community. However, it was observed that contraceptives such as Oral Pills and condoms were available in 79 per cent and 63 percent Mamata Diwas respectively. IFA tablets for treatment of anemia among children, pregnant women, and adolescent girls were not found in all the Mamata Diwas events. IFA Large tablets, IFA Small tablets and Liquid IFA were found in 67 percent, 38 percent and 27 percent Mamta Diwas events only. Similarly, de-worming tablets and ORS packets were available in 59 percent and 78 percent events, respectively. Medicine for integrated management of neonatal and childhood illness was available in only 21 percent Mamata Diwas events (B.5.5).

Table: B.5.5. Availability of Medicine during Mamata Diwas (%)

Contraceptives, Drugs and Prophylaxes	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Oral Pills	69.4	74.7	88.8	81.4	78.9
Condoms	46.9	56	75	72.1	63.2
IFA Large	66.3	65.8	62.5	72.7	66.8
IFA Small	50.0	48.2	33.8	82.0	37.6
Liquid IFA	44.9	24.1	18.8	28.5	26.9
IMNCI drugs	15.3	19.5	20.6	27.3	21.1
ORS	67.3	72	85.6	87.2	78.3
De-worming tablets	44.9	59.9	63.1	62.2	59.1
Total (N)	**98**	**257**	**160**	**172**	**687**

Duration of Mamata Diwas: The duration of Mamata Diwas ranged from one hour to six hours across different location of Mamata Diwas during Q4. It started at 7:00 am earliest and continued till 1:00 pm in a few cases. In majority of the Mamta Diwas, the total duration was observed ranging between two and three hours.

Support of community groups to service providers: The village level functionaries almost unanimously reported receiving support from Mothers committees, self help groups, Gaon Kalyan Samities, Balika Mandals and the community in general (as reported by 80 to 90% of AWWs and ANMs) . However, support of non government organizations (NGOs) and youth clubs remained elusive in a large majority of the cases.

5.4 Awareness and Participation of Women in Mamata Diwas

At the household level the lactating mother, pregnant mothers and mothers of children 6-59 months were interviewed to find out their awareness on the Mamata Diwas. Improvement in the awareness of Mamata Diwas was found in Q4. As many as 58 percent pregnant women, 53 percent mothers and 60 percent lactating mothers revealed their awareness on Mamata Diwas.

With regard to participation in the Mamata Diwas, 85 percent lactating mothers, 86 percent pregnant women and 81 percent of mothers of 6-59 month old children had participated in Mamata Diwas. The overall satisfaction with the Mamta Diwas among these categories of beneficiaries ranged between 81 percent and 84 percent.

Table: B.5.6. Awareness and Participation of Women in Mamata Diwas (%)

	Q1			Q2			Q3			Q4			Consolidated		
Particulars	**Lactating women**	**Pregnant women**	**Mothers of 6-59 months**	**Lactating women**	**Pregnant women**	**Mothers of 6-59 months**	**Lactating women**	**Pregnant women**	**Mothers of 6-59 months**	**Lactating women**	**Pregnant women**	**Mothers of 6-59 months**	**Lactating women**	**Pregnant women**	**Mothers of 6-59 months**
% aware about Mamata Diwas	48.2	44.8	45.2	58.0	54.3	56.5	57.7	55.1	54.7	59.7	57.6	53.4	55.5	52.5	52.3
Total N	**2365**	**2355**	**4438**	**2329**	**2400**	**4318**	**1673**	**1717**	**3249**	**1833**	**1837**	**3288**	**8200**	**8308**	**15059**
% participated in Mamata Diwas	76.6	77.1	73.1	89.2	88.8	87.4	86.4	89.6	81.3	85.6	88.9	80.5	84.6	86.2	81.1
Total N	**1139**	**1055**	**2005**	**1351**	**1303**	**2439**	**966**	**946**	**1777**	**1095**	**1059**	**1757**	**4551**	**4363**	**7879**
% satisfied with Mamata Diwas	68.8	76.5	70.2	83.7	82.6	79.6	83.4	84.7	82.2	11.2	91.0	89.6	82.2	84.3	81.0
Total N	**603**	**586**	**1043**	**1205**	**1157**	**2132**	**835**	**848**	**1410**	**937**	**941**	**1415**	**3580**	**3532**	**5981**

Summary

During the Q3 Mamata Diwas was observed to have been organized in 85 percent AWCs. regularly and as per the stipulated date. As mandated, in majority of the Mamata Diwas, the ANMs and AWWs were present. However, presence of ICDS supervisors was not found in many AWCs during Mamata Diwas. Functional equipment for growth monitoring of children was found in most of the AWCs observing Mamata Divas. However, equipment for hemoglobin count was found in very few AWCs. Other instruments such as for BP measurement were also lacking in some of the sites. Awareness of the Mamata Diwas has not shown improvement in the intervening period among different categories of benficiaries.

6.0 Pustikar Diwas

Pustikar Diwas, a community based health intervention targeting malnourished children initiated by the joint efforts of the Health and Family Welfare Department and Women and Child Development Department is a referral event organized mid-monthly at designated heath centers (PHCs and CHCs) in blocks across Odisha. As per the event guidelines, children below the age of 5 identified as being malnourished at Mamata Diwas are referred to Pustikar Diwas for a health checkup by a Medical Officer at the designated block PHC/CHC. Post the checkup, the beneficiaries who attend Pustikar Diwas are given medical assistance either by providing free medication or by providing financial assistance to purchase the medicines. In the event of the child being diagnosed as being severely malnourished, he/she is referred to a higher (specialized) center like a district hospital for further treatment. This secondary grassroots referral event (the first being Mamata Diwas) is envisioned to help the concerned agencies in identifying malnourished children at an early stage and help mitigate child mortality rates in the state.

Children in the Grade II, III and IV who are severely underweight (New WHO Growth Standard), are referred by the ANM/AWW to the Pustikar Diwas. Following are the broad objectives of Pustikar Diwas:

- To reduce the risk of death and disease amongst (0-5 yrs) children due to malnutrition.
- To prevent malnutrition in early childhood through the promotion of improved child feeding, care giving, and care seeking practices at the facility, family and community levels
- To strengthen the convergence between Health & ICDS in order to improve the nutritional status of (0-5 yrs.) children; and
- To strengthen the capacity of individuals, families, communities and the health systems to effectively manage and prevent malnutrition.

In order to gauge the impact of the event, Pustikar Diwas was observed in 79 blocks of rural Odisha in Q2. The following sections discuss the findings of the observations from the Q2 of the concurrent monitoring. Observation has been made following the operational frame work and the list of logistics laid down in the Pustikar Diwas operational guidelines. Issues related to the various important components of Pustikar Diwas have been discussed in the ensuing paragraphs.

6.1 Observation of Pustikar Diwas

The observations carried out by trained investigators showed diverse aspects of the event ranging from logistical arrangements of the event to adherence of protocols related to presence of heath functionaries, referral processes and assistance to target groups/beneficiaries among others.

As per the event directives, Pustikar Diwas was conducted on the scheduled date in most of the blocks indicating proper adherence to the guidelines. However, of these 43 blocks, the event could not be observed in 18 blocks. However in few other blocks the event was not organized due to other reasons (owing to CHC staff busy with their official reporting work; shortage of funds for financial assistance; insufficient mobilization of beneficiaries; etc)

Table B.6.1: Number of Pustikar Diwas Observed

Observation of Pustikar Diwas	Q 1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Pustikar Diwas observed	69.2	73.4	70	58.1	68.8
Pustikar Diwas not observed	30.8	26.6	30	41.9	31.3
Total	**78**	**79**	**40**	**43**	**240**

The following are the findings at a glance from the observation of Pustikar Diwas.

Summary Findings of Pustikar Diwas Observation (N= 40)

Indicators	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
% Blocks where Pustikar Diwas was observed out of 240 Blocks visited	69	73.4	70	58.1	68.8
% of Pustikar Diwas transportation / funds for transportation provided	87.0	93	86.7	88	77.6
% of Pustikar Diwas where enrollment register properly filled up	100	98.3	96.4	100	95.8
% Pustikar Diwas where financial support register properly filled up	94.4	89.7	92.9	96	86.7
% Pustikar Diwas where referral slip properly filled up	92.6	77.6	92.9	100	83.6
% Pustikar Diwas where history format properly filled up	88.9	77.6	67.9	100	79.4
% Mothers (0 to 6 months children) aware about Pustikar Diwas	10.2	13.5	7.3		
% Pregnant Women aware about Pustikar Diwas	14.3	15.3	9		

The observations recorded diverse aspects of the activities ranging from logistical arrangements of the event to adherence of protocols related to presence of heath functionaries, referral processes and assistance to target groups/beneficiaries among others. The subsequent sections discuss the participation of providers and beneficiaries in Pustikar Diwas.

6.2 Participation of Providers and Beneficiaries

Pustikar Diwas involves a number of health and ICDS functionaries with designated duties. The operational guideline mandates presence of both ICDS and health functionaries during Pustikar Diwas. These functionaries include, ANM, Block Extension Educator (BEE), Lady Health Visitor (LHV), ICDS Supervisor and Medical Officer (MO) / AYUSH (MO) / Child Development Programme Officer (CDPO) and Block Programme Officer (BPO).

Mobilization efforts post the initial identification phase is a necessary pre-requisite for sustained success of the event. Towards this, at the time of referral the village ASHA or AWW is expected to accompany the children and their parents to the health center as per protocol. It was observed that in most of the cases, beneficiaries were accompanied by the AWW (85%) or ASHA (56%). In a majority of the events AWW accompanied the health provider, while in a few events AWW and ASHA both were accompanying the beneficiaries to the event.
As regards the participation of supervisory level of functionaries, it was found that ICDS supervisor was present in 45 percent of the Pustikar Diwas events, whereas LHVs were present in even lesser number of events.

The BEE/BPO who is usually in charge of handling cash disbursements for medical or transport related expenses was observed to be present in a majority of the centers. The Medical Officer (MO) is required to be mandatorily present to conduct the clinical diagnosis of the referred beneficiaries. As was observed the MO was available in most of the centers where Pustikar Diwas was conducted. (Table B.6.2).

Table B.6.2: Participation of Service Provider during Pustikar Diwas

Personnel	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
AWW	94.4	70.7	85.7	96.0	84.8
ANM	14.8	17.2	17.9	20.0	17.0
ASHA	64.8	41.4	53.6	76.6	56.4
ICDS-Supervisor	61.1	34.5	39.3	40.0	44.8
LHV	57.1	25.9	21.4	40.0	35.8
BEE/BPO	90.2	79.3	78.6	96.0	83.6
Medical Officer	85.2	86.2	96.4	88.0	87.9
CDPO	25	8.6	14.3	8.0	13.3

As mentioned earlier, under the event guidelines, children identified as malnourished at Mamata Diwas are to be referred to Pustikar Diwas for a health checkup / clinical diagnosis by a Medical Officer at the designated block CHC / PHC. In this context it was found that a total of 316 malnourished children were referred in Q3 to the respective Pustikar Diwas events.

Nutritional Status of Referred Children

A majority of the children (72%) referred to the Pustikar Diwas in Q4 were Grade III, whereas 19 per cent were in Grade II and 9 percent in Grade IV (Fig. B6.1). Out of the 420 malnourished children referred to the Pustikar Diwas in Q3, 207 children were visiting the Pustikar Diwas for the first time. In addition to the new cases there were 213 follow-up cases those who had already attended Pustikar Diwas in the previous month. Out of the 213 follow-up cases, 60 cases were identified as cured and 1 child were referred to a higher centre. Treatment was provided to 276 children and payment on the spot was made to 381 cases (Table B.6.3)

Fig. B6.1: Nutritional Status of Referred Children

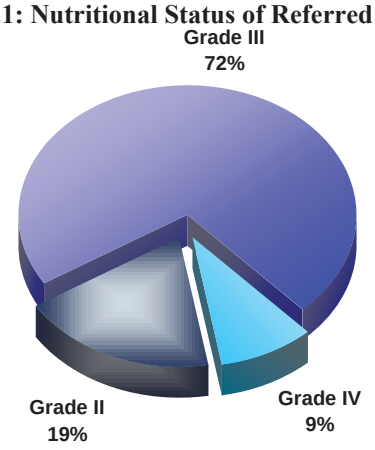


Table B.6.3: Type of Cases Referred to the Pustikar Diwas (Number)

	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
New cases identified	639	481	151	207	1478
Follow up cases	552	304	165	213	1232
Children managed and treated	748	254	147	276	1425
Children referred to higher center	16	11	3	1	31
Cases identified as cured	122	91	71	60	344
Cases payment on the spot for treatment	919	605	285	381	2190

6.3 Type of Formats

Primarily, there are four type of formats used during the Pustikar Diwas. These are enrollment register, financial support register, and referral slip and history format. The field teams were requested to observe how different formats and referral slips are being filled up. In all the 25 Pustikar Diwas events, the enrollment registers were observed to have been filled up properly. However, in Q4 financial support register and history taking format were not filled up properly in 1 and 2 blocks, respectively (Table B.6.4).

Table B.6.4: Filling of Different Formats during Pustikar Diwas (Number)

Formats	Q1 Observation			Q2 Observation			Q3 Observation			Q4 Observation			Consolidated		
	Filled properly	Not filled properly	Total	Filled properly	Not filled properly	Total	Filled properly	Not filled properly	Total	Filled properly	Not filled properly	Total	Filled properly	Not filled properly	Total
Enrollment register	54	0	54	57	1	58	27	1	28	25	0	25	163	2	165
Financial support register	51	3	54	52	6	58	26	2	28	24	1	25	153	12	165
Referral slip	50	4	54	45	13	58	26	2	28	25	0	25	146	19	165
History format	48	6	54	45	13	58	19	9	28	23	2	25	135	30	165

As per the process, the formats and referral slips should be filled on the spot. However, it was observed that in some of the PHCs, these were not filled on the spot. (Table B.6.5)

Table B.6.5: Filling of Different Format on Spot (%)

Formats	Q1 Observation			Q2 Observation			Q3 Observation			Q4 Observation			Consolidated		
	Filled properly	Not filled properly	Total	Filled properly	Not filled properly	Total	Filled properly	Not filled properly	Total	Filled properly	Not filled properly	Total	Filled properly	Not filled properly	Total
Enrollment register	100	0	54	98.3	1.7	58	96.4	3.6	28	100.0	0.0	25	95.8	4.2	165
Financial support	94.4	5.6	54	89.7	10.3	58	82.1	17.9	28	96.0	4.0	25	86.7	13.3	165

Formats	Q1 Observation			Q2 Observation			Q3 Observation			Q4 Observation			Consolidated		
	Filled properly	Not filled properly	Total	Filled properly	Not filled properly	Total	Filled properly	Not filled properly	Total	Filled properly	Not filled properly	Total	Filled properly	Not filled properly	Total
register															
Referral slip	92.6	7.4	54	77.6	22.4	58	89.3	10.7	28	100.0	0.0	25	83.6	164.4	165
History format	88.9	11.1	54	77.6	22.4	58	64.3	35.7	28	100.0	0.0	25	79.4	20.6	165

6.4 Provision of Various Facilities on Pustikar Diwas

Beneficiaries traveled from far to access the health services provided at Pustikar Diwas. The farthest AWC room where the beneficiaries attended Pustikar Diwas was located at a distance of 34.8 Km. Hence, it was expected that basic amenities would be available at the Pustikar Diwas events for patients and their attendants.

Table B.6.6: Farthest and Nearest AWC from Pustikar Diwas Site

Average Distance (in KM)	Q1 Observation	Q2 Observation	Q3 Observation	Q4 Observation	Consolidated
Average Farthest AWC from the Pustikar Diwas	39.4	37.2	44.7	34.8	38.8
Average Nearest AWC from Pustikar Diwas	1.1	1.37	1	1.1	1.1

With respect to logistical arrangements, provisions for basic facilities such as drinking water and seating arrangements for beneficiaries was made in around half of the Pustikar Diwas events. However, separate toilet facilities for beneficiaries were absent in most of the PHC/CHCs.

It was found that transportation was arranged for patients only in 1 Pustikar Diwas events and in 22 events financial support was provided in lieu of transportation. In case of the latter beneficiaries were reimbursed for the costs they had incurred for coming to the event site.

Table B.6.7: Facilities provided during Pustikar Diwas

Formats	Q1 Observation			Q2 Observation			Q3 Observation			Q4 Observation			Consolidated		
	Provided	Not Provided	Total	Provided	Not Provided	Total	Provided	Not Provided	Total	Provided	Not Provided	Total	Provided	Not Provided	Total
Transport arrangement	5	49	54	11	47	58	3	25	28	1	24	25	20	145	165
Financial support for transport	42	12	54	43	15	58	21	7	28	22	3	25	128	37	165
Drinking water	34	20	54	29	29	58	19	9	28	12	13	25	94	71	165
Sitting arrangement	37	17	54	29	29	58	22	6	28	18	7	25	106	59	165
Toilet facility	35	19	54	22	36	58	12	16	28	12	13	25	81	84	165

6.5. Awareness and Participation of Lactating and Pregnant Women in Pustikar Diwas

A sizable number of lactating mothers and pregnant women were interviewed during the household survey in order to find their perception and participation in Pustikar Diwas. It is important to mention here that these respondents are not sampled from the attendees of the Pustikar Diwas but are from the households in the catchment area of the Pustikar Diwas. It was felt that their awareness of Pustikar Diwas would serve as an authentic finding to assess awareness and participation among the beneficiaries of this event. It was found that only 9 per cent of the lactating mothers and 10 per cent of pregnant women knew about Pustikar Diwas. Among those who knew about it, only 12 per cent of lactating and 11 per cent of pregnant women had attended it. (Table B.6.8)

Table B.6.8: Awareness and Participation of Lactating and Pregnant Women in Pustikar Diwas

	Q1		Q2		Q3		Q4		Consolidated	
Particulars	**Lactating women**	**Pregnant women**	**Lactating women**	**Pregnant women**	**Lactating women**	**Pregnant women**	**Lactating women**	**Pregnant women**	**Lactating women**	**Pregnant women**
% aware about Pustikar Diwas	10.2	14.3	13.5	17.3	7.3	9	8.6	9.6	10.2	12.8
Total N	**1139**	**813**	**1351**	**1157**	**966**	**848**	**1001**	**941**	**4551**	**3759**
% Ever attended Pustikar Diwas	15.5	19	14.3	8	29.6	22.4	11.7	11.1	16.4	13.5
Total N	**116**	**116**	**182**	**200**	**71**	**76**	**94**	**90**	**463**	**482**

Analyses of the data revealed that only 1 per cent of children were ever referred to Pustikar Diwas during Q4. Mostly, the referrals came from the ANM; major reasons for referral being, poor nutritional status (37%), fever (32%) and diarrhea (16%). Most of the children (68%) who were referred to Pustikar Diwas attended the event. Of those who attended Pustikar Diwas, 92 per cent were given medicine and sent back. They were also counseled by the doctors (92%). Around 77 per cent reported that the condition of the child improved in these cases. (Table B.6.9)

Table B6.9: Referral of children (aged 6-59 months) to Pustikar Diwas and Services Availed at Pustikar Diwas

	Q1	Q2	Q3	Q4	TOTAL
Particulars	**%**	**%**	**%**	**%**	**%**
% children ever referred to Pustikar Diwas	3.6	2.4	4	1.4	2.1
Person referred					
ANM	86.8	90.4	96.4	94.7	92.2
LHV	5.7	1.9	0	0.0	1.7
Medical Officer	3.8	3.8	1.8	0.0	2.8
Other	3.8	3.8	1.8	0.0	3.4
Reason for referral					
Diarrhea	13.2	9.6	12.5	15.8	12.3
Fever	30.2	28.8	51.8	31.6	36.9
Poor nutritional status	45.3	55.8	28.6	36.8	41.9
Other	5.7	5.8	0	15.8	9.0
Child attended Pustikar Diwas					
Yes	77.4	90.4	85.7	68.4	82.7
No	22.6	9.6	14.3	31.6	17.3
Child given any treatment at Pustikar Diwas					
Given medicine and sent back	85.4	76.6	62.5	92.3	75.7
Admitted in the PHC	9.8	17.0	29.2	0.0	17.6
Referred to another hospital	4.9	6.4	8.3	0.0	6.1
Received any counseling by doctor					
Yes	85.4	91.5	85.4	92.3	87.8
No	14.6	8.5	14.6	7.7	12.2
Improvement in condition of the child					
Yes	82.9	93.6	87.5	76.9	87.2
No	17.1	6.4	12.5	23.1	12.8

In a majority of the Pustikar Diwas events, arrangements were made for dispensing medicines. In most of the cases, only general medicines were required which were either already available at the PHC/CHC or were sourced from neighbouring medical stores. In a few cases beneficiaries were given some financial assistance to purchase medicines. In these cases the amount provided was usually Rs. 100

As was observed in Q3, the primary deterrent to the success of the event continued to be "inadequate fund flow" for medical and transport related costs, whereas there had been some improvement with respect to the presence of service providers. Despite these shortcomings, beneficiary satisfaction was observed to be quite high, especially in the blocks where monetary assistance was available. This is apparent given that of the 25 blocks where Pustikar Diwas was observed; in more than three-fourths of the blocks the event attendees expressed satisfaction with the referrals event despite funding issues in some areas. On a concluding note, the event should be used for providing specialized counseling and information dissemination. Pustikar Diwas as a referral event is a platform for greater engagement with target beneficiaries many of whom are unaware of proper nutrition and health practices, and should look to go beyond mere identification and further referral of malnourished children.

Summary

In around 30 per cent of the blocks Pustikar Diwas was not observed on the stipulated date. Paucity of funds had been one of the major reasons for not organizing Pustikar Diwas in some of the Blocks. Wherever Pustikar Diwas was observed, it recorded presence of front line functionaries like the AWW, ICDS Supervisors and LHV. However, presence of senior officials of ICDS like CDPO was found in less number of events. It was observed that in most of the events the protocol was followed and various formats and referral slips were filled properly. However, logistics support like sitting arrangements, toilets and drinking water was a problem. Awareness on Pustikar Diwas found to be very low among the women. Most of the children who attended Pustikar Diwas were given medicine and sent back and only a few were referred to higher centers. Of those who attended Pustikar Diwas, majority of them confirmed to have seen an improvement in their child's health. On the whole it was observed that the biggest motivating factor for attending Pustikar Diwas for the beneficiaries was monetary assistance.

7.1 Sector Meeting

Joint sector meeting between the ICDS and the health department is a common forum for strengthening convergent actions at different levels. It assumes a significant importance as both health and ICDS sectors converge during this meeting where the vital statistics are exchanged and discrepancies in the numbers are sorted out. Verbal autopsy is done to understand how an incidence of maternal and child mortality (if any) could have been prevented by joint action of both Health and ICDS.

The meeting at the sector level is scheduled tentatively from 25th to 30th of each month. The joint sector meeting at the sector level is convened by the ANM and is attended by MPHS (Multipurpose Health Workers both male and female), ASHA, AWWs, ICDS Supervisors, Self Employed Mechanics of Rural Water Supply and Sanitation. Similarly the Block level meetings are held by both ICDS and Health and each department invites the other during the meeting.

The field team made an attempt to observe the joint sector meeting both at the sector level and at the block level. As mentioned earlier, the joint sector meetings at the sector level are by and large

organized between 25th and 30th of a month. However, it was found that these dates are not adhered strictly and changed from time to time.

The target of the field team for coverage of sector meetings in Q4 was 69. However, the team could manage to contact 40 CDPOs for getting a date for the joint sector meetings. Even after getting a date, when visited on many occasions it was found that the meetings were rescheduled. Finally, the team could observe few sector meetings.

The observations of the joint sector meetings during Q4 show improvement in the participation of both health and ICDS officials department when compared to the previous quarter.

- In over 50 percent cases there was participation of officials from both departments at the sector level meetings. However, there remains lot of scope for improvement with regard to undertaking joint sector meetings and bring in convergence.

Annexures
TRIANGULATION OF CCM DATA WITH ICDS MPR DATA

ANNEX 1 :TRIANGULATION OF CCM DATA ON NUTRITION STATUS WITH ICDS MPR DATA AT DISTRICT AND STATE LEVEL

District	Source	IAP STANDARD						WHO STANDARD			
		Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
ANGUL	MPR Nov 11							68.4	31.6	5.1	**120377**
	CCM Consolidated							60.6	39.4	9.3	**388**
BALASORE	MPR Nov 11	51.23	34.70	13.72	0.33	0.02	**224107**				
	CCM Consolidated	47.41	34.39	16.69	1.50	0.00	**599**				
BARAGARH	MPR Nov 11							68.5	31.5	1.9	**128899**
	CCM Consolidated							56.4	43.4	15.2	**580**
BHADRAK	MPR Nov 11	49.13	37.80	12.73	0.31	0.03	**138815**				
	CCM Consolidated	51.15	33.05	12.64	2.87	0.29	**348**				
BOLANGIR	MPR Nov 11							58.5	41.5	6.5	**173930**
	CCM Consolidated							53.8	45.7	17.0	**654**
BOUDH	MPR Nov 11							62.0	38.0	5.6	**43954**
	CCM Consolidated							54.2	45.1	16.0	**144**
CUTTACK	MPR Nov 11							73.5	26.5	2.5	**181933**
	CCM Consolidated							68.9	28.9	10.7	**672**
DEOGARH	MPR Nov 11							56.2	43.8	2.8	**29623**
	CCM Consolidated							59.6	39.7	14.4	**146**
DHENKANAL	MPR Nov 11							59.7	40.3	0.3	**106414**
	CCM Consolidated							65.9	33.6	10.9	**393**
GAJAPATI	MPR Nov 11							58.7	41.3	7.9	**71580**
	CCM Consolidated							60.6	39.1	15.2	**330**
GANJAM	MPR Nov 11							60.6	39.4	4.0	**324494**
	CCM Consolidated							61.0	38.0	13.3	**1058**
JAGATSINGHPUR	MPR Nov 11	69.15	27.55	3.20	0.09	0.01	**92976**				
	CCM Consolidated	69.00	19.50	8.75	2.00	0.75	**400**				
JAJPUR	MPR Nov 11	53.46	32.57	13.58	0.35	0.04	**169250**				
	CCM Consolidated	60.00	27.40	9.40	2.60	0.60	**500**				
JHARSUGUDA	MPR Nov 11							62.2	37.8	5.0	**44259**
	CCM Consolidated							62.4	37.1	12.2	**245**
KALAHANDI	MPR Nov 11							59.0	41.0	8.7	**163940**
	CCM Consolidated							56.3	43.4	14.0	**620**
KANDHAMAL	MPR Nov 11							56.4	43.6	4.8	**86847**
	CCM Consolidated							57.2	42.7	13.5	**572**
KENDRAPARA	MPR Nov 11	59.16	30.03	10.57	0.21	0.03	**170414**				
	CCM Consolidated	64.77	25.23	8.41	0.68	0.91	**440**				
KEONJHAR	MPR Nov 11	46.76	37.26	15.31	0.63	0.03	**193601**				
	CCM Consolidated	42.15	32.62	21.08	3.54	0.62	**650**				
KHURDA	MPR Nov 11							75.4	24.6	2.3	**89562**
	CCM Consolidated							71.5	26.2	9.1	**485**
KORAPUT	MPR Nov 11							48.8	51.2	10.4	**167135**

ANNEX 1 :TRIANGULATION OF CCM DATA ON NUTRITION STATUS WITH ICDS MPR DATA AT DISTRICT AND STATE LEVEL

District	Source	IAP STANDARD						WHO STANDARD			
		Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
	CCM Consolidated							55.5	42.5	14.8	**595**
	MPR Nov 11							45.2	54.8	15.7	**83111**
MALKANGIRI	CCM Consolidated							45.5	53.4	19.0	**290**
	MPR Nov 11	46.22	40.58	12.57	0.58	0.04	**264605**				
MAYURBHANJ	CCM Consolidated	38.82	40.66	17.52	2.77	0.23	**1301**				
	MPR Nov 11							50.5	49.5	13.2	**145305**
NAWARANGPUR	CCM Consolidated							54.9	44.9	15.7	**477**
	MPR Nov 11	61.51	30.44	7.80	0.23	0.03	**82449**				
NAYAGARH	CCM Consolidated	49.62	34.26	13.85	1.01	1.26	**397**				
	MPR Nov 11							58.4	41.6	6.9	**72025**
NUAPADA	CCM Consolidated							52.5	47.1	18.1	**238**
	MPR Nov 11	61.11	31.65	7.08	0.13	0.03	**154081**				
PURI	CCM Consolidated	66.06	23.54	8.21	1.82	0.36	**548**				
	MPR Nov 11							54.3	45.7	9.6	**93018**
RAYAGADA	CCM Consolidated							52.6	45.8	13.8	**530**
	MPR Nov 11							58.7	41.3	7.2	**85260**
SAMBALPUR	CCM Consolidated							53.1	46.7	14.9	**435**
	MPR Nov 11							74.0	26.0	1.3	**58617**
SUBARNAPUR	CCM Consolidated							56.7	43.3	14.2	**282**
	MPR Nov 11							55.4	44.6	8.6	**178498**
SUNDARGARH	CCM Consolidated							56.0	43.7	14.9	**828**
	MPR Nov 11	**53.43**	**34.59**	**11.58**	**0.36**	**0.03**	**1490298**	**60.1**	**40.0**	**6.3**	**2448784**
ODISHA STATE	**CCM Consolidated**	**51.34**	**31.89**	**14.05**	**2.24**	**0.48**	**5183**	**58.3**	**40.9**	**13.9**	**9962**

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
Cuttack	Cuttack Sadar	MPR Jan 11	67.3	27.4	5.2	0.1	0.0	11915				
		CCM	74.0	16.0	8.0	2.0	-	50				
	Baranga	MPR Mar 11	64.9	29.0	6.0	0.2	0.0	7697				
		CCM	76.0	18.0	4.0	2.0	-	50				
	Kantapada	MPR Nov 10	68.3	26.5	4.9	0.3	0.0	8204				
		CCM	60.0	26.0	12.0		2.0	50				
	Niali	MPR Oct 11	88.0	10.0	0.1	1.9	0.0	11587				
		CCM	68.0	28.0	4.0	-	-	50				
	Tangi-Chowdwar	MPR Apr 11	67.9	26.3	5.6	0.1	0.0	13388				
		CCM	58.0	26.0	10.0	6.0	-	50				
	Salipur	MPR Apr 11	63.5	30.2	6.1	0.1	0.0	16358				
		CCM	64.0	20.0	14.0	2.0	-	50				
	Nischintakoili	MPR May 11	79.9	17.0	2.8	0.2	0.0	15963				
		CCM	42.0	22.0	16.0	16.0	4.0	50				
	Mahanga	MPR Feb 11	62.8	32.1	5.0	0.1	0.0	15895				
		CCM	68.0	14.0	10.0	4.0	4.0	50				
	Athgarh	MPR Nov 11							71.5	28.5	0.8	14406
		CCM							69.4	28.6	8.2	49
	Tigiria	MPR Jun 11	56.6	37.4	6.0	0.1	0.0	6380				
		CCM	48.0	32.0	20.0	-	-	50				
	Baramba	MPR Aug 11	61.1	31.1	7.5	0.3	0.0	11210				
		CCM	58.0	20.0	16.0	6.0	-	50				
	Narasinghpur	MPR Jun 11	56.0	34.1	9.7	0.2	0.0	11339				
		CCM	56.0	34.0	8.0	2.0	-	50				
	Banki	MPR Oct 11	52.4	33.1	14.3	0.3	0.0	9352				
		CCM	62.0	28.0	8.0	2.0	-	50				
	Dampara	MPR Jan 11	56.6	32.6	10.5	0.4	0.0	9023				
		CCM	54.0	34.0	10.0		2.0	50				
Jajpur	Jajpur	MPR Oct 11	47.7	33.8	18.0	0.5	0.0	16224				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
		CCM	56.0	36.0	8.0	-	-	50				
	Binjharpur	MPR Apr 11	49.1	35.1	15.6	0.2	0.0	15911				
		CCM	66.0	18.0	12.0	4.0	-	50				
	Korei	MPR Nov 10	55.7	30.9	12.7	0.6	0.0	17078				
		CCM	58.0	20.0	16.0	6.0	-	50				
	Bari	MPR Jan 11	65.3	25.8	8.6	0.3	0.0	15589				
		CCM	76.0	20.0	2.0	2.0	-	50				
	Rasulpur	MPR Feb 11	66.4	25.8	7.5	0.3	0.0	15480				
		CCM	60.0	32.0	8.0	-	-	50				
	Dasarathpur	MPR Mar 11	45.9	38.2	15.5	0.3	0.0	19515				
		CCM	58.0	34.0	4.0	2.0	2.0	50				
	Sukinda	MPR Jun 11	52.5	35.5	11.3	0.7	0.0	17000				
		CCM	54.0	22.0	14.0	8.0	2.0	50				
	Dangadi	MPR May 11	44.8	33.3	21.3	0.5	0.0	13290				
		CCM	52.0	28.0	14.0	4.0	2.0	50				
	Dharmasala	MPR Nov11	50.8	34.1	14.7	0.3	0.1	20860				
		CCM	50.0	36.0	14.0	-	-	50				
	Badachana	MPR Jun 11	59.3	30.7	9.9	0.2	0.0	22094				
		CCM	70.0	28.0	2.0	-	-	50				
Jagatsinghpur	Jagatsinghpur	MPR Nov 10	68.2	29.1	2.6	0.1	0.0	12203				
		CCM	60.0	16.0	14.0	6.0	4.0	50				
	Raghunathpur	MPR Feb 11	53.6	36.8	9.4	0.2	0.0	12868				
		CCM	80.0	14.0	6.0	-	-	50				
	Biridi-F	MPR Jun 11	68.9	26.1	4.8	0.2	0.0	5766				
		CCM	64.0	32.0	4.0	-	-	50				
	Balikuda	MPR Oct 11	59.8	37.1	3.0	0.1	0.0	15567				
		CCM	70.0	28.0	2.0	-	-	50				
	Nuagaon	MPR Oct 11	95.1	4.9	0.0	0.0	0.0	7512				
		CCM	80.0	18.0	2.0	-	-	50				
	Tirtol	MPR	70.5	26.3	3.1	0.1	0.0	13997				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
		Mar 11										
		CCM	72.0	12.0	14.0	2.0		50				
	Kujang	MPR May 11	67.8	29.8	2.2	0.2	0.0	15539				
		CCM	54.0	20.0	18.0	6.0	2.0	50				
	Erasma	MPR Aug 11	72.3	22.2	5.3	0.2	0.0	11543				
		CCM	72.0	16.0	10.0	2.0	-	50				
Kendrapara	Kendrapara	MPR Nov 10	66.3	32.0	1.4	0.3	0.0	14918				
		CCM	62.0	22.0	12.0	-	4.0	50				
	Derabis	MPR Nov 11	64.4	30.4	5.0	0.2	0.0	18307				
		CCM	65.0	22.5	10.0	-	2.5	40				
	Marsaghai	MPR Nov 11	66.5	24.3	9.0	0.1	0.0	16151				
		CCM	72.0	22.0	6.0	-	-	50				
	Mahakalapada	MPR Jun 11	56.2	29.2	14.5	0.2	0.0	25874				
		CCM	70.0	22.0	6.0	2.0		50				
	Garadpur	MPR Aug 11	49.2	34.6	16.0	0.2	0.0	10721				
		CCM	72.0	22.0	6.0	-	-	50				
	Pattamundai	MPR May 11	46.5	40.0	13.3	0.2	0.0	23037				
		CCM	70.0	26.0	4.0	-	-	50				
	Rajnagar	MPR Mar 11	43.0	34.4	22.5	0.1	0.0	20688				
		CCM	48.0	34.0	16.0	-	2.0	50				
	Aul	MPR Nov 11	65.7	26.2	7.9	0.2	0.0	17564				
		CCM	66.0	24.0	8.0	2.0	-	50				
	Rajkanika	MPR Jan 11	55.7	30.5	13.6	0.2	0.0	16991				
		CCM	58.0	32.0	8.0	2.0	-	50				
Balasore	Balasore	MPR Mar 11	48.7	38.1	13.0	0.2	0.0	29504				
		CCM	50.0	30.0	20.0	-	-	50				
	Remuna	MPR Nov 11	52.8	33.6	13.2	0.4	0.0	21633				
		CCM	36.0	36.0	28.0	-	-	50				
	Basta	MPR Jan 11	45.8	42.8	10.9	0.4	0.0	19973				
		CCM	52.0	38.0	8.0	2.0	-	50				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
	Baliapal	MPR Jun 11	53.8	36.4	9.5	0.3	0.0	18799				
		CCM	44.0	32.0	20.0	4.0	-	50				
	Bhograi	MPR Aug 11	144.7	69.2	37.6	1.0	0.0	13314				
		CCM	36.0	34.0	28.0	2.0	-	50				
	Jaleswar	MPR Feb 11	41.5	38.8	19.2	0.4	0.0	25161				
		CCM	52.0	30.0	18.0	-	-	50				
	Bahanaga	MPR Oct 11	52.4	36.3	10.9	0.4	0.0	13172				
		CCM	52.0	36.0	12.0	-	-	50				
	Soro	MPR Feb 11	56.3	35.8	7.6	0.3	0.0	16988				
		CCM	44.0	42.0	8.0	6.0	-	50				
	Simulia	MPR Apr 11	55.3	33.9	10.5	0.2	0.0	12385				
		CCM	54.0	36.0	10.0	-	-	50				
	Khaira	MPR Nov 10	49.9	37.6	11.8	0.6	0.1	20135				
		CCM	42.9	38.8	18.4	-	-	49				
	Nilgiri	MPR May 11	45.6	36.5	17.6	0.3	0.0	15891				
		CCM	42.0	34.0	22.0	2.0	-	50				
	Oupada	MPR Oct 11	56.3	35.2	8.1	0.3	0.0	9025				
		CCM	64.0	26.0	8.0	2.0	-	50				
Bhadrak	Bhadrak	MPR Oct 11	54.9	38.1	6.8	0.1	0.0	30365				
		CCM	48.0	38.0	12.0	2.0	-	50				
	Bonth	MPR Mar 11	54.3	36.0	9.3	0.3	0.0	12653				
		CCM	60.0	28.0	10.0	2.0	-	50				
	Basudevpur	MPR Nov 11	48.3	37.4	13.9	0.3	0.0	17671				
		CCM	54.0	34.0	8.0	4.0	-	50				
	Tihidi	MPR Aug 11	39.3	43.2	17.4	0.1	0.0	24159				
		CCM	40.0	36.0	18.0	4.0	2.0	50				
	Chandabali	MPR Jan 11	49.6	37.4	12.6	0.5	0.0	28152				
		CCM	46.0	40.0	14.0	-	-	50				
	Dhamnagar	MPR May 11	53.8	35.2	10.6	0.4	0.0	16606				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
		CCM	66.0	20.0	8.0	6.0	-	50				
	Bhandari pokhari	MPR Nov 10	36.3	31.4	31.8	0.4	0.1	14659				
		CCM	43.8	35.4	18.8	2.1	-	48				
Puri	Krushna- prasad	MPR Nov 11	68.0	27.6	4.3	0.1	0.1	8375				
		CCM	74.0	18.0	8.0	-	-	50				
	Brahmagiri	MPR Aug 11	51.8	38.9	9.1	0.1	0.0	12745				
		CCM	48.0	40.0	10.0	2.0	-	50				
	Sadar	MPR May 11	72.8	25.1	2.0	0.1	0.0	29553				
		CCM	68.0	22.0	10.0	-	-	50				
	Gop	MPR Mar 11	72.6	24.7	2.4	0.2	0.1	17216				
		CCM	84.0	14.0	-	-	2.0	50				
	Kakatpur	MPR Apr 11	80.8	15.8	3.2	0.1	0.0	10102				
		CCM	70.0	20.0	6.0	4.0	-	50				
	Astarang	MPR Nov 11	51.4	44.3	4.3	0.0	0.0	8930				
		CCM	74.0	24.0	2.0	-	-	50				
	Nimapara	MPR Jun 11	65.8	31.7	2.3	0.2	0.0	20933				
		CCM	62.5	29.2	8.3	-	-	48				
	Pipili	MPR Nov 11	44.7	43.8	11.3	0.1	0.1	13825				
		CCM	52.0	34.0	10.0	4.0	-	50				
	Delang	MPR Jan 11	54.0	29.1	16.7	0.1	0.0	16345				
		CCM	74.0	18.0	6.0	2.0	-	50				
	Kanas	MPR Nov 10	72.0	19.2	8.7	0.1	0.0	17764				
		CCM	58.0	22.0	14.0	4.0	2.0	50				
	Satyabadi	MPR Feb 11	56.0	38.2	5.5	0.4	0.0	9844				
		CCM	62.0	18.0	16.0	4.0	-	50				
Khurda	Bhubaneswar	MPR Jun 11	58.2	34.4	7.3	0.1	0.0	10359				
		CCM	58.0	36.0	6.0	-	-	50				
	Jatni	MPR Feb 11	56.9	37.2	5.9	0.0	0.0	13243				
		CCM	66.0	18.0	12.0	4.0	-	50				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
	Balipatna	MPR May 11	61.5	31.9	6.6	0.1	0.0	8540				
		CCM	78.0	14.0	6.0	2.0	-	50				
	Balianta	MPR Aug 11							76.5	23.5	0.2	8275
		CCM							58.3	37.5	14.6	48
	Khurda	MPR Mar 11	59.7	35.6	4.5	0.1	0.0	14151				
		CCM	76.0	10.0	12.0	2.0	-	50				
	Tangi	MPR Nov 11							83.2	16.8	0.1	14328
		CCM							72.9	25.0	4.2	48
	Banpur	MPR Nov 10	48.4	45.5	5.7	0.4	0.0	15597				
		CCM	60.0	26.0	8.0	2.0	4.0	50				
	Bolgarh	MPR Jan 11	58.7	32.6	8.3	0.2	0.1	13794				
		CCM	68.0	18.0	8.0	2.0	4.0	50				
	Chilika	MPR Apr 11	60.3	31.7	7.8	0.2	0.0	12135				
		CCM	50.0	38.0	12.0	-	-	50				
	Begunia	MPR Oct 11							72.7	27.3	1.6	9990
		CCM							69.4	28.6	6.1	49
Nayagarh	Nayagarh	MPR Nov 10	55.0	37.7	7.1	0.2	0.0	10988				
		CCM	64.0	24.0	8.0	-	4.0	50				
	Ranpur	MPR Sep 11	58.6	32.6	8.6	0.2	0.0	14884				
		CCM	56.0	40.0	4.0	-	-	50				
	Odagaon	MPR Aug 11	66.0	29.1	4.7	0.2	0.0	13602				
		CCM	44.0	30.0	20.0	2.0	4.0	50				
	Nuagaon	MPR Jan 11	60.2	33.5	5.9	0.3	0.0	10053				
		CCM	50.0	31.3	18.8	-	-	48				
	Khandapada	MPR Apr 11	66.2	29.8	3.9	0.2	0.0	8803				
		CCM	50.0	38.0	12.0	-	-	50				
	Bhapur	MPR May 11	53.0	32.5	14.3	0.2	0.0	9180				
		CCM	48.0	40.0	10.0	-	2.0	50				
	Daspalla	MPR Jun 11	63.6	26.7	9.1	0.5	0.1	12016				
		CCM	36.0	34.0	24.0	6.0	-	50				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
	Gania	MPR Feb 11	51.1	36.9	11.7	0.3	0.1	3524				
		CCM	49.0	36.7	14.3	-	-	49				
Mayurbhanj	Rairangpur	MPR Apr 11	46.5	42.8	10.2	0.5	0.0	8255				
		CCM	42.0	38.0	20.0	-	-	50				
	Bijatala	MPR Jan 11	37.1	47.2	14.7	0.9	0.1	8660				
		CCM	54.0	32.0	14.0	-	-	50				
	Bisoi	MPR Feb 11	42.9	43.1	13.2	0.7	0.0	8959				
		CCM	24.0	58.0	12.0	6.0	-	50				
	Jamda	MPR Oct 11	45.7	40.0	13.7	0.5	0.1	7488				
		CCM	48.0	32.0	16.0	4.0	-	50				
	Bahalda	MPR Oct 11	48.7	40.3	10.4	0.5	0.1	9284				
		CCM	56.0	28.0	14.0	2.0	-	50				
	Tiring	MPR Feb 11	35.9	48.6	15.0	0.5	0.0	6691				
		CCM	30.0	42.0	24.0	4.0	-	50				
	Kusumi	MPR Jan 11	46.9	39.5	13.1	0.5	0.0	10767				
		CCM	44.0	44.0	10.0	2.0	-	50				
	Baripada	MPR Jan 11	52.4	37.0	10.2	0.4	0.1	14284				
		CCM	54.0	32.0	14.0	-	-	50				
	Kuliana	MPR Mar 11	48.1	40.1	11.3	0.5	0.0	11595				
		CCM	42.0	48.0	8.0	2.0	-	50				
	Suliapada	MPR Nov 10	41.3	46.6	11.6	0.4	0.0	8653				
		CCM	58.0	30.0	6.0	6.0	-	50				
	Rasgovindpur	MPR Nov 11	46.0	43.3	10.3	0.4	0.0	9771				
		CCM	40.0	40.0	20.0	-	-	50				
	Morada	MPR Feb 11	45.3	47.0	7.3	0.3	0.0	11179				
		CCM	28.0	36.0	34.0	2.0	-	50				
	Samakhunta	MPR May 11	43.9	43.1	12.3	0.6	0.1	8547				
		CCM	44.0	32.0	22.0	2.0	-	50				
	Bodasahi	MPR Aug 11	48.4	39.1	12.1	0.4	0.0	14575				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
		CCM	38.0	30.0	30.0	2.0	-	50				
	Bangiriposi	MPR Mar 11	48.1	42.5	8.9	0.5	0.1	11507				
		CCM	36.0	46.0	18.0	-	-	50				
	Betnati	MPR Apr 11	49.2	39.0	11.2	0.5	0.0	15985				
		CCM	36.0	42.0	20.0	-	2.0	50				
	Sarasakana	MPR Aug 11	53.7	36.4	9.2	0.7	0.0	10756				
		CCM	30.0	42.0	24.0	4.0	-	50				
	Udala	MPR Oct 11	46.8	43.7	9.2	0.4	0.0	8631				
		CCM	46.0	38.0	14.0	2.0	-	50				
	Kaptipada	MPR Apr 11	43.8	42.0	13.6	0.6	0.1	20047				
		CCM	30.0	50.0	20.0	-	-	50				
	Khunta	MPR Feb 11	45.0	45.0	9.5	0.4	0.1	7768				
		CCM	46.0	44.0	10.0	-	-	50				
	Gopabandhunagar	MPR May 11	46.5	42.0	10.9	0.6	0.0	7011				
		CCM	18.0	64.0	10.0	6.0	2.0	50				
	Karanjia	MPR May 11	40.2	41.4	17.6	0.7	0.1	9944				
		CCM	19.6	54.9	23.5	2.0	-	51				
	Thakurmunda	MPR Jun 11	39.9	40.0	19.0	1.1	0.1	12005				
		CCM	24.0	42.0	20.0	14.0	-	50				
	Jasipur	MPR Jan 11	37.6	41.1	20.4	0.9	0.1	12794				
		CCM	54.0	30.0	14.0	2.0	-	50				
	Sukruli	MPR Nov 11	46.9	38.2	14.1	0.7	0.0	6503				
		CCM	32.0	50.0	14.0	2.0	2.0	50				
	Raruan	MPR Jun 11	48.5	39.1	12.0	0.4	0.0	7868				
		CCM	36.0	32.0	24.0	8.0	-	50				
Dhenkanal	Sadar	MPR Aug 11							58.5	41.5	0.3	14240
		CCM							73.5	24.5	6.1	49
	Odapada	MPR Nov 11							60.9	39.1	0.3	11601
		CCM							72.3	27.7	4.3	47
	Gondia	MPR	51.5	36.9	11.0	0.4	0.1	16473				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
		Apr 11										
		CCM	44.0	28.0	22.0	6.0	-	50				
	Hindol	MPR Nov 10	54.5	35.4	9.7	0.4	0.0	17333				
		CCM	50.0	26.0	14.0	10.0	-	50				
	Kamakhyanagar	MPR Sep 11							54.8	45.2	0.3	11282
		CCM							71.4	28.6	4.1	49
	Kankadahad	MPR Oct 11							45.5	54.5	0.7	12201
		CCM							51.0	49.0	10.2	49
	Bhuban	MPR Jun 11	55.1	35.1	9.7	0.1	0.0	10279				
		CCM	72.0	18.0	8.0	2.0	-	50				
	Parjang	MPR Mar 11	48.7	38.5	12.6	0.2	0.0	12603				
		CCM	60.0	20.0	18.0	2.0	-	50				
Angul	Angul	MPR Jun 11	59.9	30.3	9.5	0.3	0.0	20551				
		CCM	40.0	48.0	8.0	4.0	-	50				
	Banarpal	MPR Nov 10	59.5	33.5	6.6	0.4	0.0	19677				
		CCM	46.9	34.7	10.2	8.2	-	49				
	Chhendipada	MPR Mar 11	55.5	35.6	8.5	0.4	0.0	16593				
		CCM	60.0	18.0	16.0	4.0	2.0	50				
	Talcher	MPR Sep 11	73.9	22.6	3.3	0.1	0.0	14203				
		CCM	46.0	40.0	8.0	6.0	-	50				
	Kaniha	MPR May 11	58.0	34.1	7.6	0.2	0.0	12500				
		CCM	42.0	42.0	12.0	4.0	-	50				
	Athmallik	MPR Oct 11	47.3	36.9	15.2	0.5	0.1	13661				
		CCM	46.0	48.0	6.0	-	-	50				
	Kishorenagar	MPR Feb 11	46.0	41.6	12.1	0.3	0.0	10659				
		CCM	54.0	34.0	12.0	-	-	50				
	Pallahara	MPR Aug 11	46.5	40.7	12.4	0.4	0.0	14291				
		CCM	44.0	40.0	14.0	2.0	-	50				
Bolangir	Bolangir	MPR Jan 11	43.0	36.7	19.8	0.5	0.0	21102				
		CCM	44.0	42.0	12.0	2.0	-	50				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
	Loisinga	MPR Jun 11	55.6	32.6	11.3	0.5	0.0	9277				
		CCM	36.0	38.0	18.0	8.0	-	50				
	Puintala	MPR Apr 11	46.4	37.5	15.4	0.7	0.0	10267				
		CCM	52.0	32.0	14.0	2.0	-	50				
	Agalpur	MPR Oct 11							42.7	57.3	4.4	8693
		CCM							66.0	34.0	14.0	50
	Deogaon	MPR Mar 11	47.4	36.6	15.5	0.6	0.0	10816				
		CCM	36.0	44.0	18.0	2.0	-	50				
	Gudvella	MPR Apr 11	48.5	36.3	14.6	0.6	0.0	6795				
		CCM	42.9	44.9	8.2	4.1	-	49				
	Patnagarh	MPR May 11	47.5	35.4	16.5	0.6	0.0	16372				
		CCM	34.0	30.0	22.0	12.0	2.0	50				
	Belpara	MPR Nov 11							49.6	50.4	9.3	15145
		CCM							58.7	41.3	13.0	46
	Khaparakhol	MPR Aug 11							60.0	40.0	6.7	13206
		CCM							40.4	59.6	27.7	47
	Titilagarh	MPR Oct 11							54.8	45.2	4.7	15345
		CCM							49.0	46.9	8.2	49
	Muribahal	MPR Jan 11	48.9	33.4	16.9	0.8	0.0	15465				
		CCM	48.0	40.0	12.0	-	-	50				
	Saintala	MPR Nov 10	43.2	34.9	20.8	1.0	0.1	13250				
		CCM	26.5	20.4	24.5	10.2	18.4	49				
	Bongamunda	MPR May 11	46.7	32.8	20.1	0.4	0.0	14283				
		CCM	35.4	33.3	22.9	6.3	2.1	48				
	Tureikela	MPR Feb 11	53.4	25.8	20.3	0.5	0.0	13125				
		CCM	42.0	34.0	24.0	-	-	50				
Subarnapur	Tarva	MPR Feb 11	56.4	36.8	6.5	0.2	0.0	12208				
		CCM	32.0	46.0	18.0	2.0	2.0	50				
	Sonepur	MPR Apr 11	61.8	33.1	4.9	0.2	0.0	10265				
		CCM	52.0	30.0	14.0	2.0	2.0	50				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
	Dunguripalli	MPR Nov 10	56.1	39.2	4.5	0.3	0.0	12188				
		CCM	36.0	42.0	12.0	10.0	-	50				
	Binika	MPR Oct 11							52.8	47.2	0.2	10674
		CCM							59.6	40.4	14.9	47
	Biramaharajpur	MPR Oct 11							81.3	18.7	1.3	10100
		CCM							46.8	53.2	12.8	47
	Ullunda	MPR Jun 11	52.6	36.5	10.6	0.2	0.0	8949				
		CCM	50.0	28.0	12.0	4.0	6.0	50				
Sambalpur	Dhankhanda	MPR Sep 11	41.2	37.1	20.8	0.8	0.1	10820				
		CCM	28.0	34.0	28.0	8.0	2.0	50				
	Maneswar	MPR Nov 11							59.0	41.0	8.1	7808
		CCM							70.2	27.7	4.3	47
	Jujumura	MPR Sep 11	40.2	39.7	19.0	1.0	0.2	8082				
		CCM	24.0	40.0	34.0	2.0	-	50				
	Rengali	MPR Aug 11	41.0	39.5	18.4	1.0	0.1	7943				
		CCM	38.0	38.0	22.0	2.0	-	50				
	Rairakhol	MPR Jun 11	38.2	36.7	24.5	0.7	0.0	7945				
		CCM	48.0	46.0	6.0	-	-	50				
	Naktideul	MPR Nov 10	36.3	45.0	16.9	1.6	0.2	6869				
		CCM	50.0	31.3	14.6	4.2	-	48				
	Kuchinda	MPR Jan 11	41.2	41.5	16.4	0.8	0.1	7860				
		CCM	42.0	38.0	20.0	-	-	50				
	Bamra	MPR Mar 11	40.8	43.2	14.9	1.0	0.1	9495				
		CCM	32.0	48.0	18.0	2.0	-	50				
	Jamankira	MPR Oct 11							63.9	36.1	6.1	8709
		CCM							62.5	37.5	8.3	48
Bargarh	Bargarh	MPR Sep 11							62.4	37.6	4.9	13193
		CCM							61.2	38.8	10.2	49
	Barpalli	MPR Feb 11	51.4	40.0	7.9	0.6	0.0	11546				
		CCM	44.0	34.0	20.0	2.0	-	50				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
	Attabira	MPR May 11	50.8	40.8	7.5	0.8	0.0	14980				
		CCM	28.0	46.0	22.0	4.0	-	50				
	Bhatli	MPR Jan 11	44.7	42.5	11.6	1.1	0.0	8463				
		CCM	36.0	44.0	18.0	2.0	-	50				
	Bheden	MPR Feb 11	48.6	44.8	6.0	0.5	0.0	11307				
		CCM	72.0	12.0	10.0	6.0	-	50				
	Ambabhana	MPR Oct 11							63.4	36.6	7.1	5577
		CCM							66.0	34.0	10.6	47
	Rajborasambar	MPR Jun 11	45.4	44.1	10.0	0.4	0.0	12652				
		CCM	34.0	44.0	20.0	2.0	-	50				
	Paikmal	MPR Nov 10	45.7	40.8	12.6	0.9	0.0	14069				
		CCM	40.0	28.0	22.0	10.0	-	50				
	Jharabandha	MPR Mar 11	43.2	42.3	13.6	0.8	0.1	8315				
		CCM	46.0	34.0	16.0	4.0	-	50				
	Gaisilet	MPR Aug 11							64.6	35.4	7.8	5823
		CCM							64.6	35.4	10.4	48
	Sohela	MPR Nov 11							83.8	16.2	2.6	14236
		CCM							58.0	42.0	14.0	50
	Bijepur	MPR Apr 11	44.2	41.8	13.4	0.6	0.0	11021				
		CCM	42.0	40.0	16.0	2.0	-	50				
Keonjhar	Anadapur	MPR Nov 10	46.0	35.8	17.3	0.8	0.0	15890				
		CCM	46.0	34.0	18.0	2.0	-	50				
	Hatadihi	MPR Sep 11	59.8	28.6	11.4	0.2	0.0	18160				
		CCM	52.0	30.0	18.0	-	-	50				
	Ghasipur	MPR Feb 11	52.4	37.1	10.1	0.3	0.0	16383				
		CCM	48.0	20.0	22.0	8.0	2.0	50				
	Champua	MPR Aug 11	44.1	45.0	10.4	0.4	0.0	13388				
		CCM	44.0	36.0	18.0	2.0	-	50				
	Jhumpura	MPR Apr 11	42.9	46.2	10.6	0.3	0.0	15636				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
		CCM	36.0	30.0	20.0	14.0	-	50				
	Joda	MPR Nov 11	36.1	38.1	24.8	1.0	0.0	18323				
		CCM	52.0	36.0	8.0	4.0	-	50				
	Keonjhargarh	MPR Mar 11	43.4	40.5	15.3	0.7	0.0	15512				
		CCM	50.0	30.0	18.0	2.0	-	50				
	Harichandanpur	MPR May 11	41.9	39.5	17.9	0.7	0.0	18548				
		CCM	44.0	28.0	28.0	-	-	50				
	Patna	MPR Nov 11	50.4	37.1	12.0	0.5	0.0	10966				
		CCM	36.0	42.0	22.0	-	-	50				
	Ghatgaon	MPR Jan 11	44.1	38.5	16.5	0.9	0.0	12137				
		CCM	46.0	28.0	22.0	4.0	-	50				
	Saharpada	MPR Apr 11	46.5	40.6	12.4	0.5	0.0	8929				
		CCM	26.0	36.0	34.0	4.0	-	50				
	Telkoi	MPR Nov 11	46.6	43.2	9.7	0.5	0.0	11907				
		CCM	44.0	38.0	14.0	2.0	2.0	50				
	Banspal	MPR Jun 11	31.9	37.4	27.8	2.7	0.2	15867				
		CCM	24.0	36.0	32.0	4.0	4.0	50				
Sundargarh	Kuarmunda	MPR Nov 10	40.4	44.3	14.6	0.6	0.1	12064				
		CCM	56.3	25.0	16.7	2.1	-	48				
	Nuagaon	MPR Apr 11	39.5	42.3	17.8	0.4	0.1	10988				
		CCM	40.0	34.0	26.0	-	-	50				
	Bisra	MPR Apr 11	50.9	40.2	8.4	0.3	0.1	8700				
		CCM	40.0	42.0	16.0	2.0	-	50				
	Lathikata	MPR Feb 11	40.3	41.5	17.2	0.9	0.1	15760				
		CCM	56.0	32.0	8.0	4.0	-	50				
	Lafripada	MPR Aug 11	43.0	39.3	16.7	0.9	0.1	7683				
		CCM	42.0	34.0	20.0	4.0	-	50				
	Hemgiri	MPR Mar 11	40.6	39.1	19.4	0.8	0.1	8469				
		CCM	38.0	42.0	20.0	-	-	50				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
	Rajgangpur	MPR Feb 11	45.2	37.2	17.1	0.4	0.0	17326				
		CCM	36.0	48.0	10.0	6.0	-	50				
	Kutra	MPR Jan 11	44.1	39.8	15.2	0.9	0.1	8758				
		CCM	28.0	50.0	16.0	6.0	-	50				
	Sundargarh	MPR Oct 11							57.2	42.8	7.1	7148
		CCM							44.4	51.1	17.8	45
	Bargaon	MPR Apr 11	42.0	43.1	14.1	0.7	0.1	7018				
		CCM	52.0	38.0	8.0	2.0	-	50				
	Subdega	MPR Mar 11	43.3	42.8	13.1	0.7	0.1	6522				
		CCM	28.0	48.0	24.0	-	-	50				
	Balisankara	MPR Oct 11							58.1	41.9	5.3	8507
		CCM							67.3	32.7	12.2	49
	Tangarpalli	MPR May 11	42.8	38.8	17.3	0.9	0.2	5250				
		CCM	34.0	34.0	32.0	-	-	50				
	Lahunipada	MPR Juun 11	36.9	42.5	19.5	1.0	0.1	14108				
		CCM	44.0	34.0	14.0	8.0	-	50				
	Koira	MPR Mar 11	42.4	37.0	19.5	1.1	0.1	13068				
		CCM	36.0	42.0	16.0	4.0	2.0	50				
	Bonaigarh	MPR Nov 11							53.5	46.5	10.5	7591
		CCM							66.7	33.3	14.6	48
	Gurundia	MPR Oct 11							49.7	50.3	16.6	6702
		CCM							42.0	58.0	16.0	50
Jharsuguda	Jharsuguda	MPR Oct 11							56.2	43.8	7.4	6334
		CCM							67.3	32.7	10.2	49
	Lakhanpur	MPR Oct 11							60.2	39.8	6.1	13806
		CCM							59.2	40.8	14.3	49
	Kolabira	MPR Nov 10	33.7	44.3	21.2	0.7	0.0	4313				
		CCM	42.9	46.9	8.2	2.0	-	49				
	Laikera	MPR Mar 11	40.1	43.7	15.5	0.7	0.0	4277				
		CCM	38.0	42.0	16.0	4.0		50				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
	Kirimira	MPR Jun 11	39.3	40.9	18.9	0.8	0.1	3543				
		CCM	46.0	40.0	14.0	-	-	50				
Deogarh	Riamal	MPR Aug 11							48.7	51.3	0.6	11402
		CCM							48.0	52.0	22.0	50
	Barkote	MPR Nov 10	48.4	42.8	8.1	0.7	0.1	12116				
		CCM	52.0	38.0	10.0	-	-	50				
	Tileibani	MPR Nov 11							52.6	47.4	1.1	9223
		CCM							62.5	37.5	14.6	48
Kalahandi	Bhawanipatna	MPR Oct 11							55.3	44.7	10.5	18170
		CCM							56.3	43.8	8.3	48
	Kesinga	MPR Nov 11							62.3	37.7	5.3	12220
		CCM							66.7	33.3	6.3	48
	Narla	MPR Mar 11	50.0	35.2	13.2	1.5	0.1	12081				
		CCM	38.0	46.0	16.0	-	-	50				
	M.Rampur	MPR Feb 11	52.9	31.5	13.6	2.0	0.1	9029				
		CCM	42.0	48.0	6.0	4.0	-	50				
	Karlamunda	MPR Oct 11							57.7	42.3	4.1	5377
		CCM							64.6	35.4	12.5	48
	Lanjigarh	MPR Apr 11	34.3	39.3	23.8	2.4	0.2	11031				
		CCM	40.0	30.0	22.0	8.0	-	50				
	ThumalRampur	MPR Apr 11	33.6	37.6	25.9	2.8	0.1	9847				
		CCM	36.0	42.0	14.0	6.0	2.0	50				
	Dharmagarh	MPR Jun 11	NA	NA	NA	NA	NA	NA				
		CCM	42.0	42.0	16.0	-	-	50				
	Junagarh	MPR Nov 10	41.0	37.1	20.6	1.2	0.1	18407				
		CCM	44.0	42.0	12.0	2.0	-	50				
	Jaipatna	MPR Jan 11	38.9	39.6	19.1	2.4	0.1	13819				
		CCM	40.0	34.0	20.0	6.0	-	50				
	Koksara	MPR Jan 11	41.0	36.0	20.0	2.9	0.1	12105				
		CCM	42.0	38.0	12.0	6.0	2.0	50				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
	Kalampur	MPR May 11	42.9	37.1	18.3	1.7	0.1	5892				
		CCM	34.0	46.0	16.0	4.0	-	50				
	Golamunda	MPR Aug 11	NA	NA	NA	NA	NA	NA				
		CCM	26.0	52.0	12.0	6.0	4.0	50				
Nuapada	Nawapara	MPR May 11	42.3	38.7	17.4	1.5	0.1	15389				
		CCM	36.0	20.0	36.0	8.0	-	50				
	Komna	MPR Nov 11							55.6	44.4	8.4	16764
		CCM							54.0	44.0	14.0	50
	Khariar	MPR Nov 10	39.2	38.7	19.8	2.1	0.1	14046				
		CCM	58.3	18.8	20.8	-	2.1	48				
	Sinapalli	MPR Jun 11	45.0	37.1	15.8	2.0	0.1	13280				
		CCM	42.0	44.0	14.0	-	-	50				
	Boden	MPR Mar 11	46.5	35.4	16.4	1.6	0.1	10016				
		CCM	26.0	54.0	16.0	4.0	-	50				
Ganjam	Rangeilunda	MPR Jan 11	57.8	32.9	9.1	0.2	0.0	18179				
		CCM	61.2	18.4	14.3	6.1	-	49				
	Kukudakhandi	MPR Apr 11	49.5	37.6	12.6	0.4	0.0	15324				
		CCM	42.0	24.0	22.0	10.0	2.0	50				
	Digapahandi	MPR Apr11	51.2	35.9	12.6	0.3	0.0	19455				
		CCM	56.0	28.0	12.0	4.0	-	50				
	Sankhemundi	MPR May 11	46.3	35.2	18.4	0.1	0.0	23385				
		CCM	46.0	30.0	10.0	6.0	8.0	50				
	Chikiti	MPR Mar 11	48.5	35.3	15.8	0.3	0.0	15672				
		CCM	40.0	46.0	10.0	4.0	-	50				
	Patrapur	MPR Nov 11	NA	NA	NA	NA	NA	NA				
		CCM	48.0	38.0	14.0	-	-	50				
	Chhatrapur	MPR Feb 11	60.0	32.7	6.9	0.4	0.0	17280				
		CCM	50.0	44.0	6.0	-	-	50				
	Ganjam	MPR Jun 11	58.5	31.2	10.0	0.2	0.0	10813				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
		CCM	60.0	28.0	8.0	2.0	2.0	50				
	Khalikote	MPR Apr 11	46.2	36.2	17.4	0.2	0.0	19906				
		CCM	51.0	35.3	9.8	3.9	-	51				
	Kodala	MPR Sep 11	52.3	32.0	15.4	0.2	0.0	16207				
		CCM	74.0	18.0	6.0	2.0	-	50				
	Purusottampur	MPR Nov 11							61.6	38.4	3.0	19475
		CCM							54.0	46.0	26.0	50
	Hinjilicut	MPR Aug 11	59.6	33.6	6.5	0.3	0.0	15179				
		CCM	48.0	40.0	12.0	-	-	50				
	Polsara	MPR Nov 11							60.1	39.9	4.0	16864
		CCM							68.0	32.0	8.0	50
	K.S.Nagar	MPR May 11	51.5	37.1	11.2	0.2	0.0	15506				
		CCM	54.0	34.0	10.0	2.0	-	50				
	Bhanjanagar	MPR Mar 11	50.6	35.2	13.9	0.4	0.0	16472				
		CCM	28.0	42.0	26.0	2.0	2.0	50				
	Belguntha	MPR Nov 11	NA	NA	NA	NA	NA	NA				
		CCM	44.0	42.0	10.0	4.0	-	50				
	Jagannathprasad	MPR Feb 11	45.3	37.4	17.0	0.3	0.0	14343				
		CCM	42.0	30.0	20.0	8.0	-	50				
	Buguda	MPR Oct 11							50.3	49.7	2.2	14845
		CCM							63.0	34.8	8.7	46
	Aska	MPR Jun 11	46.8	34.2	18.9	0.1	0.0	18083				
		CCM	50.0	26.0	20.0	4.0	-	50				
	Seragad	MPR Aug 11	60.2	31.2	8.4	0.2	0.0	16941				
		CCM	50.0	24.0	20.0	4.0	2.0	50				
	Dharakote	MPR Nov 10	50.1	35.1	14.2	0.5	0.0	12943				
		CCM	50.0	32.0	12.0	4.0	2.0	50				
	Surada	MPR Jan 11	45.4	43.4	10.8	0.4	0.0	21486				
		CCM	46.0	36.0	14.0	4.0	-	50				
Gajapati	Kasinagar	MPR Sep 11							65.3	34.7	5.5	6573

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
		CCM							75.0	22.9	10.4	48
	Paralakhemundi	MPR Nov 11							75.8	24.2	0.9	8839
		CCM							69.4	30.6	4.1	49
	Rayagada	MPR May11	40.9	37.3	20.6	1.2	0.1	8844				
		CCM	20.0	42.0	28.0	6.0	4.0	50				
	Gumma	MPR Mar 11	43.4	37.7	17.8	1.0	0.1	9624				
		CCM	36.0	36.0	18.0	10.0	-	50				
	R.Udayagiri	MPR Nov 10	38.6	42.0	18.2	1.1	0.1	9943				
		CCM	54.2	25.0	16.7	2.1	2.1	48				
	Mohana	MPR Aug 11							55.9	44.1	8.9	21552
		CCM							63.8	36.2	14.9	47
	Nuagad	MPR Feb 11	45.9	34.0	18.6	1.3	0.1	7911				
		CCM	32.0	40.0	22.0	6.0	-	50				
Koraput	Koraput	MPR Mar 11	35.7	37.5	25.1	1.5	0.1	9736				
		CCM	73.5	20.4	2.0	-	4.1	49				
	Similiguda	MPR Feb 11	31.3	42.7	24.9	1.0	0.0	9851				
		CCM	62.0	22.0	14.0	2.0	-	50				
	Pottangi	MPR Jun 11	38.0	35.5	25.1	1.4	0.1	10401				
		CCM	30.0	50.0	18.0	2.0	-	50				
	Laxmipur	MPR May 11	35.8	38.4	24.0	1.6	0.1	8251				
		CCM	20.0	64.0	14.0	2.0	-	50				
	Nandapur	MPR Nov 11							83.7	16.3	1.6	12680
		CCM							47.8	52.2	21.7	46
	Bandhugaon	MPR Apr 11	40.8	37.0	21.3	0.9	0.1	11194				
		CCM	51.0	38.8	6.1	2.0	2.0	49				
	Narayanpatna	MPR Nov 11							35.9	64.1	0.9	6229
		CCM							35.0	65.0	30.0	20
	Lamtaput	MPR May 11	39.3	38.6	20.4	1.6	0.0	8577				
		CCM	56.0	32.0	10.0	2.0	-	50				
	Dasmantpur	MPR Jan 11	34.4	31.5	32.4	1.7	0.1	13552				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
		CCM	58.0	22.0	14.0	6.0	-	50				
	Jeypore	MPR Nov 10	39.2	38.4	20.3	1.8	0.2	19359				
		CCM	36.0	22.0	16.0	12.0	14.0	50				
	Kotpada	MPR Nov 10	45.1	36.0	17.3	1.5	0.0	14939				
		CCM	78.0	12.2	-	2.4	7.3	41				
	Kundara	MPR Feb 11	41.0	34.7	22.5	1.7	0.1	10964				
		CCM	30.0	48.0	18.0	4.0	-	50				
	Bariguma	MPR Aug 11	40.1	34.8	24.0	1.0	0.1	21252				
		CCM	32.0	36.0	26.0	4.0	2.0	50				
	Boipariguda	MPR Oct 11							42.9	57.1	5.7	18655
		CCM							50.0	50.0	18.2	44
Malkanagiri	Malkangiri	MPR Jun 11	33.8	40.5	23.6	1.9	0.1	12261				
		CCM	22.0	46.0	26.0	6.0	-	50				
	Korkunda	MPR Sep 11	38.5	39.0	20.6	1.8	0.1	18174				
		CCM	44.0	42.0	14.0	-	-	50				
	Podia	MPR Oct 11							42.8	57.2	18.9	7118
		CCM							33.3	64.6	25.0	48
	Khairaput	MPR Mar 11	26.5	37.9	33.5	1.9	0.1	5531				
		CCM	40.0	34.0	22.0	4.0		50				
	Kudumuluguma	MPR Jan 11	33.4	41.7	23.2	1.6	0.1	10351				
		CCM	36.0	32.0	28.0	4.0		25				
	Kalimela	MPR Oct 11							41.7	58.3	15.9	16085
		CCM							37.8	56.8	21.6	37
	Mathili	MPR Feb 11	30.4	40.5	27.3	1.8	0.1	14699				
		CCM	30.0	37.5	17.5	12.5	2.5	40				
Rayagada	Rayagada	MPR Feb 11	37.1	43.1	17.9	1.6	0.2	11325				
		CCM	34.0	42.0	18.0	4.0	2.0	50				
	Kasipur	MPR Apr 11	36.7	35.1	26.8	1.3	0.0	16329				
		CCM	42.0	40.0	14.0	4.0	-	50				
	Kolnara	MPR Nov 11							58.4	41.6	7.6	6400

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
		CCM							59.2	38.8	16.3	49
	K.Singpur	MPR Jun 11	41.2	34.7	21.5	2.4	0.2	6064				
		CCM	50.0	36.0	14.0	-	-	50				
	Gunupur	MPR Aug 11							47.0	53.0	12.3	9409
		CCM							41.3	58.7	10.9	46
	Gudari	MPR Oct 11							45.3	54.7	14.4	5812
		CCM							63.3	34.7	8.2	49
	Bisam-Cuttack	MPR Sep 11							52.3	47.7	13.2	9836
		CCM							53.1	44.9	18.4	49
	Chandrapur	MPR Jan 11	32.2	35.9	31.1	0.8	0.0	6214				
		CCM	48.0	20.0	20.0	8.0	4.0	50				
	Muniguda	MPR Nov 10	41.7	39.6	17.5	1.1	0.1	11192				
		CCM	58.0	28.0	2.0	10.0	2.0	50				
	Ramanguda	MPR May 11	38.7	38.0	21.5	1.7	0.2	4660				
		CCM	24.0	52.0	22.0	2.0	-	50				
	Padmapur	MPR Mar 11	45.9	36.8	15.9	1.3	0.2	5813				
		CCM	42.0	44.0	10.0	2.0	2.0	50				
Nawrangpur	Nawrangpur	MPR Oct 11							48.4	51.6	14.2	9705
		CCM							56.3	43.8	14.6	48
	Umerkote	MPR May 11	37.7	42.1	19.0	1.2	0.0	22230				
		CCM	34.0	32.0	34.0	-	-	50				
	Tentulikhunti	MPR Mar 11	35.9	39.8	23.0	1.2	0.1	10227				
		CCM	48.0	32.0	16.0	4.0	-	50				
	Chandahandi	MPR Aug 11	35.4	40.1	23.1	1.4	0.0	9265				
		CCM	48.0	40.0	10.0	2.0	-	50				
	Kosagumuda	MPR Jun 11	36.1	48.1	14.2	1.5	0.0	21408				
		CCM	46.0	48.0	6.0	-	-	50				
	Papadahandi	MPR Apr 11	37.9	40.4	20.5	1.1	0.1	16209				
		CCM	34.0	36.0	24.0	4.0	2.0	50				
	Jharigam	MPR Nov 10	37.0	39.7	22.1	1.2	0.0	23693				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
		CCM	32.0	28.0	26.0	14.0	-	50				
	Dabugaon	MPR Jan 11	34.3	43.6	20.5	1.5	0.1	9795				
		CCM	40.0	42.0	16.0	2.0	-	50				
	Raighar	MPR Nov 11							49.7	50.3	12.6	20778
		CCM							51.1	46.7	24.4	45
	Nandahandi	MPR Feb 11	33.1	47.4	17.8	1.6	0.1	7468				
		CCM	38.0	50.0	12.0	-	-	50				
Kandhamal	Balliguda	MPR Nov 11							51.9	48.1	6.5	10560
		CCM							59.6	40.4	12.8	47
	Chakpad	MPR May 11	51.7	31.9	14.8	1.5	0.1	3924				
		CCM	54.0	32.0	10.0	4.0	-	50				
	Daringibadi	MPR Jan 11	50.8	37.7	11.1	0.4	0.0	19653				
		CCM	52.0	22.0	22.0	4.0	-	50				
	G.Udayagiri	MPR Feb 11	54.8	33.0	11.3	0.8	0.1	3777				
		CCM	46.0	36.0	14.0	4.0	-	50				
	Kotgarh	MPR Jun 11	49.4	31.6	18.4	0.5	0.1	7988				
		CCM	54.0	26.0	20.0	-	-	50				
	Nuagaon	MPR Jan 11	46.5	40.0	12.6	0.8	0.1	6251				
		CCM	38.0	44.0	18.0	-	-	50				
	Raikia	MPR Mar 11	48.6	34.6	15.3	1.4	0.0	6356				
		CCM	44.0	42.0	10.0	4.0	-	50				
	Tikabali	MPR Oct 11							59.8	40.2	6.2	4482
		CCM							59.2	40.8	12.2	49
	Tumudibandh	MPR Apr 11	39.2	34.3	25.8	0.7	0.1	7982				
		CCM	30.0	48.0	18.0	2.0	2.0	50				
	Phulbani	MPR Sep 11	49.3	35.6	14.0	0.9	0.1	6171				
		CCM	50.0	26.0	20.0	2.0	2.0	50				
	Phiringia	MPR Nov 10	47.1	38.9	13.2	0.7	0.0	9856				
		CCM	42.0	38.0	18.0	-	2.0	50				
	Khajuripada	MPR	46.8	35.7	16.5	0.8	0.2	4467				

ANNEX-2 TRIANGULATION OF CCM DATA ON NUTRITION STATUS OF CHILDREN WITH ICDS MPR DATA AT BLOCK LEVEL

District	Block	Data Source	IAP STANDARD						NEW WHO GROWTH STANDARD			
			Normal	Gr.I	Gr.II	Gr.III	Gr.IV	Total No of Children	Normal	Underweight	Severely Underweight	Total No of Children
		Aug 11										
		CCM	44.0	44.0	8.0	2.0	2.0	50				
Boudh	Boudh	MPR May 11	65.7	30.1	0.0	4.2	0.0	15793				
		CCM	44.0	26.0	26.0	2.0	2.0	50				
	Harabhanga	MPR Nov 10	46.7	35.9	16.3	1.1	0.0	14586				
		CCM	50.0	34.0	16.0	-	-	50				
	Kantamal	MPR Oct 11							58.2	41.8	6.2	16769
		CCM							47.9	50.0	8.3	48

ANNEX -3 :TRIANGULATION OF DATA ON SNP RECEIVED FOR 21+ DAYS AT BLOCK LEVEL

DISTRICT	BLOCKS	SNP received for 21+ days (CCM Data)	SNP received for 21+ days (MPR Data)
ANGUL	BANARPAL	55.60	99.11
ANGUL	RAJKISHORA NAGAR	56.50	94.56
ANGUL	CHENDIPADA	30.60	100.00
ANGUL	KANIHA	62.50	NA
ANGUL	ANGUL	55.30	100.00
ANGUL	PALLARHARA	43.50	100.00
ANGUL	TALCHER	53.30	100.00
ANGUL	ATHAMALIK	24.30	100.00
BALASORE	KHAIRA	85.10	100.00
BALASORE	BASTA	48.00	95.96
BALASORE	SORO	52.40	88.89
BALASORE	JALESWAR	46.50	88.98
BALASORE	BALASORE SADAR	58.00	NA
BALASORE	SIMULIA	16.00	100.00
BALASORE	NILAGIRI	29.20	100.00
BALASORE	BALIAPAL	66.00	100.00
BALASORE	BHOGRAI	57.10	65.71
BALASORE	OUPADA	55.30	100.00
BALASORE	BAHANGA	65.30	100`
BALASORE	REMUNA	21.70	100.00
BARGARH	PAIKMAL	51.10	75.50
BARGARH	BHATILI	57.10	97.60
BARGARH	BHEDEN	70.20	62.26
BARGARH	BARAPALLI	87.20	86.47
BARGARH	JHARBANDH	28.30	NA
BARGARH	BIJEPUR	29.80	100.00
BARGARH	ATTABIRA	67.40	100.00
BARGARH	RAJ BORASAUSAR	56.50	100.00
BARGARH	GAISILET	55.30	100.00
BARGARH	BARGARH	59.10	67.83
BARGARH	AMBABHONA	59.20	100.00
BARGARH	SOHELLA	36.70	100.00
BHADARAK	BHANDARIPOKHARI	64.40	100.00
BHADARAK	CHANDABALI	60.40	89.25
BHADARAK	BONTH	40.00	49.15
BHADARAK	DHAMNAGAR	23.90	100.00
BHADARAK	TIHIDI	39.00	100.00
BHADARAK	BHADRAK	55.00	100.00
BHADARAK	BASUDEVPUR	50.00	100.00
BOLANGIR	SAINTALA	61.30	100.00
BOLANGIR	BOLANGIR	44.90	88.24

ANNEX -3 :TRIANGULATION OF DATA ON SNP RECEIVED FOR 21+ DAYS AT BLOCK LEVEL

DISTRICT	BLOCKS	SNP received for	SNP received for
BOLANGIR	MURIBAHAL	40.00	100.00
BOLANGIR	TUREIKELA	51.00	82.39
BOLANGIR	DEOGAON	40.80	100.00
BOLANGIR	GUDVELA	54.20	87.85
BOLANGIR	PUINTALA	34.70	100.00
BOLANGIR	PATNAGARH	56.50	100.00
BOLANGIR	BONGAMUNDA	57.40	100.00
BOLANGIR	LOISINGA	52.20	100.00
BOLANGIR	KHAPRAKHOL	63.80	100.00
BOLANGIR	AGALPUR	38.10	100.00
BOLANGIR	TITLAGARH	28.00	100.00
BOLANGIR	BELPARA	34.00	100.00
BOUDH	HARBHANGA	93.30	NA
BOUDH	BOUDH	39.60	100.00
BOUDH	KANTAMAL	31.90	100.00
CUTTACK	ADASPUR (KANTAPADA)	36.70	0.00
CUTTACK	SADAR	40.40	100.00
CUTTACK	DAMPADA	16.00	100.00
CUTTACK	MAHANGA	56.50	NA
CUTTACK	BARANGA	18.00	100.00
CUTTACK	SALEPUR	36.70	100.00
CUTTACK	TANGI CHOWDHAR	26.50	96.20
CUTTACK	NISCHITAKOILI	24.50	100.00
CUTTACK	TIGIRIA	74.00	100.00
CUTTACK	NARSINGPUR	85.40	100.00
CUTTACK	BADAMBA	87.80	100.00
CUTTACK	NIALI	57.50	100.00
CUTTACK	BANKI	61.70	100.00
CUTTACK	ATHAGARH	57.10	100.00
DEOGARH	BARKOTE	36.60	87.31
DEOGARH	REAMAL	51.00	100.00
DEOGARH	TILEIBANI	79.20	100.00
DHENKANAL	HINDOL	30.60	99.76
DHENKANAL	PARJANG	16.70	98.80
DHENKANAL	GANDHIA	61.20	100.00
DHENKANAL	BHUBAN	41.30	100.00
DHENKANAL	DHENKANAL SADAR	93.80	100.00
DHENKANAL	KAMAKHYANAGAR	38.30	100.00
DHENKANAL	KANKADAHAD	44.70	98.51
DHENKANAL	OLAPADA	59.60	100.00
GAJAPATI	R. UDAYGIRI	31.90	72.65
GAJAPATI	NUAGADA	77.10	100.00
GAJAPATI	GUMMA	86.00	100.00
GAJAPATI	RAYGADA	46.90	100.00

ANNEX -3 :TRIANGULATION OF DATA ON SNP RECEIVED FOR 21+ DAYS AT BLOCK LEVEL

DISTRICT	BLOCKS	SNP received for	SNP received for
GAJAPATI	MOHANA	34.00	100.00
GAJAPATI	KASHINAGAR	52.20	NA
GAJAPATI	PARLAKHEMUNDI	28.60	100.00
GANJAM	DHARAKOTE	28.60	NA
GANJAM	SORADA	63.30	100.00
GANJAM	RANGEILUNDA	74.40	100.00
GANJAM	J.N.PRASAD	58.30	91.96
GANJAM	CHHATRAPUR	68.20	100.00
GANJAM	CHIKITI	80.00	100.00
GANJAM	BHANJANAGAR	73.50	97.13
GANJAM	KHALIKOTE	89.40	99.63
GANJAM	DIGAPAHANDI	85.10	77.82
GANJAM	KUKUDAKHANDI	91.70	90.91
GANJAM	SANAKHEMUNDI	40.40	99.17
GANJAM	K S NAGAR	34.00	100.00
GANJAM	ASKA	46.30	100.00
GANJAM	GANJAM	63.00	100.00
GANJAM	HINJILIKUT	13.60	100.00
GANJAM	SHERAGADA	19.00	100.00
GANJAM	BEGUNIAPADA/KODALA	59.30	100.00
GANJAM	PRATAPUR	36.40	100.00
GANJAM	BUGUDA	38.00	100.00
GANJAM	POLASARA	38.00	100.00
GANJAM	BELGUNTHA	28.60	100.00
GANJAM	PURUSOTTAMPUR	25.00	100.00
JAGATSINGHPUR	JAGATSINGPUR	54.30	89.84
JAGATSINGHPUR	TIRTOL	55.10	99.66
JAGATSINGHPUR	RAGHUNATHPUR	41.90	100.00
JAGATSINGHPUR	KUJANGA	6.70	94.50
JAGATSINGHPUR	BIRIDI	34.00	100.00
JAGATSINGHPUR	ERASAMA	75.00	100.00
JAGATSINGHPUR	NAUGAON	61.00	100.00
JAGATSINGHPUR	BALIKUDA	52.20	98.75
JAJPUR	KOREI	40.50	76.40
JAJPUR	BARI	33.30	100.00
JAJPUR	RASALPUR	51.20	100.00
JAJPUR	DASRATHPUR	39.40	100.00
JAJPUR	BINJHARPUR	35.70	100.00
JAJPUR	DANGADI	20.50	100.00
JAJPUR	SUKINDA	25.00	100.00
JAJPUR	BADCHANA	40.90	100.00
JAJPUR	JAJPUR	67.30	NA
JAJPUR	DHARMASALA	59.10	100.00
JHARSUGUDA	KOLABIRA	65.20	100.00

ANNEX -3 :TRIANGULATION OF DATA ON SNP RECEIVED FOR 21+ DAYS AT BLOCK LEVEL

DISTRICT	BLOCKS	SNP received for	SNP received for
JHARSUGUDA	LAIKERA	67.30	NA
JHARSUGUDA	KIRIMIRA	56.30	100.00
JHARSUGUDA	LAKHANPUR	78.70	100.00
JHARSUGUDA	JHARSUGUDA	81.60	98.73
KALAHANDI	JUNAGARH	86.50	100.00
KALAHANDI	JAIPATNA	51.10	100.00
KALAHANDI	KOKSARA	43.50	100.00
KALAHANDI	M. RAMPUR	44.40	100.00
KALAHANDI	NARLA	36.60	100.00
KALAHANDI	TH.RAMPUR	61.70	100.00
KALAHANDI	LANJIGARH	47.70	100.00
KALAHANDI	KALAMPUR	44.20	100.00
KALAHANDI	DHARMAGARH	28.10	100.00
KALAHANDI	GOLAMUNDA	56.80	100.00
KALAHANDI	KARLAMUNDA	85.10	100.00
KALAHANDI	BHAWANIPATNA	69.40	96.46
KALAHANDI	KESINGA	54.20	89.18
KANDHAMAL	PHIRINGIA	73.50	74.07
KANDHAMAL	DARINGBADI	78.00	100.00
KANDHAMAL	NUAGAON	94.00	100.00
KANDHAMAL	G. UDAYAGIRI	48.00	85.32
KANDHAMAL	RAIKIA	86.00	NA
KANDHAMAL	TUMUDIBANDHA	94.00	96.18
KANDHAMAL	CHAKAPADA	80.00	100.00
KANDHAMAL	KOTGARH	25.60	100.00
KANDHAMAL	KHAJURIPADA	21.70	100.00
KANDHAMAL	KANDHAMAL/PHULBANI	53.10	90.51
KANDHAMAL	TIKABALI	52.10	100.00
KANDHAMAL	BALIGUDA	60.90	100.00
KENDRAPARA	KENDRAPARA	25.50	NA
KENDRAPARA	RAJKANIKA	42.90	97.09
KENDRAPARA	RAJNAGAR	29.30	100.00
KENDRAPARA	PATAMUNDAI	25.00	97.27
KENDRAPARA	MAHAKALPARA	21.40	98.94
KENDRAPARA	GARADPUR	48.00	100.00
KENDRAPARA	DERABIS	17.60	100.00
KENDRAPARA	MARSAGHAI	72.70	100.00
KENDRAPARA	AUL	53.20	100.00
KEONJHAR	ANANDAPUR	87.50	93.90
KEONJHAR	HATADIHI	85.40	100.00
KEONJHAR	GHATAGAON	61.20	100.00
KEONJHAR	GHASIPURA	26.50	100.00
KEONJHAR	KEONJHAR	74.50	85.06
KEONJHAR	SAHARPADA	40.00	100.00

ANNEX -3 :TRIANGULATION OF DATA ON SNP RECEIVED FOR 21+ DAYS AT BLOCK LEVEL

DISTRICT	BLOCKS	SNP received for	SNP received for
KEONJHAR	JHUMPURA	34.00	80.86
KEONJHAR	HARICHANDANPUR	36.70	100.00
KEONJHAR	BANSPAL	61.20	100.00
KEONJHAR	CHAMPUA	34.80	100.00
KEONJHAR	TELKOI	23.40	100.00
KEONJHAR	JODA	18.60	100.00
KEONJHAR	PATNA	34.80	100.00
KHURDA	BANPUR	0.00	100.00
KHURDA	BOLGARH	37.50	100.00
KHURDA	JATANI	34.00	NA
KHURDA	KHURDA	18.80	100.00
KHURDA	CHILIKA	36.00	96.63
KHURDA	BALIPATNA	58.00	100.00
KHURDA	BHUBANESWAR	31.80	100.00
KHURDA	BALIANTA	25.00	100.00
KHURDA	BEGUNIA	35.40	100.00
KHURDA	TANGI	54.50	100.00
KORAPUT	KOTPAD	20.00	100.00
KORAPUT	JEYPORE	23.40	96.12
KORAPUT	DASAMANTHPUR	47.90	86.22
KORAPUT	KUNDRA	66.00	100.00
KORAPUT	SIMILIGUDA	57.40	93.37
KORAPUT	KORAPUT	61.70	64.52
KORAPUT	BANDHUGAON	72.90	90.76
KORAPUT	LAMPTAPUT	78.00	NA
KORAPUT	LAXMIPUR	68.00	93.67
KORAPUT	POTANGI	76.00	100.00
KORAPUT	BORIGUMMA	76.20	100.00
KORAPUT	BOIPARIGUDA	90.50	99.63
KORAPUT	NANDAPUR	25.60	NA
KORAPUT	NARAYANPATNA	45.00	100.00
MALKANGIRI	KUDUMULUGUMMA	96.00	100.00
MALKANGIRI	MATHILI	87.50	NA
MALKANGIRI	KHAIRPUT	46.70	77.38
MALKANGIRI	KORUKONDA	68.20	100.00
MALKANGIRI	MALKANAGIRI	72.00	100.00
MALKANGIRI	PODIA	89.80	NA
MALKANGIRI	KALIMELA	90.00	89.80
MAYURBHANJ	SULIAPADA	97.80	98.63
MAYURBHANJ	JASIPUR	38.00	100.00
MAYURBHANJ	BIJATOLA	57.40	100.00
MAYURBHANJ	BARIPADA	45.80	100.00
MAYURBHANJ	KUSUMI	75.50	100.00
MAYURBHANJ	KHUNTA-I	64.00	100.00

ANNEX -3 :TRIANGULATION OF DATA ON SNP RECEIVED FOR 21+ DAYS AT BLOCK LEVEL

DISTRICT	BLOCKS	SNP received for	SNP received for
MAYURBHANJ	MORADA	62.50	100.00
MAYURBHANJ	BISOI-I	64.60	100.00
MAYURBHANJ	TIRINGI	61.20	100.00
MAYURBHANJ	BANGIRIPOSI	58.00	73.22
MAYURBHANJ	KULIANA	72.00	100.00
MAYURBHANJ	KAPTIPADA	22.00	100.00
MAYURBHANJ	BETANOTI	18.00	100.00
MAYURBHANJ	RAIRANGPUR	10.60	100.00
MAYURBHANJ	SAMAKHUNTA	24.00	100.00
MAYURBHANJ	GOPABANDHUNAGAR	51.00	100.00
MAYURBHANJ	KARANJIA	52.10	100.00
MAYURBHANJ	THAKURMUNDA	37.50	100.00
MAYURBHANJ	RARUAN	54.20	100.00
MAYURBHANJ	SARASKANA	44.90	65.52
MAYURBHANJ	BADASAHI	38.80	100.00
MAYURBHANJ	UDALA	46.90	100.00
MAYURBHANJ	BAHALDA	57.40	100.00
MAYURBHANJ	JAMADA	62.00	100.00
MAYURBHANJ	RASGOVINDPUR	32.70	100.00
MAYURBHANJ	SUKRULI	30.60	100.00
NAWARANGPUR	JHARIGAON	82.20	97.09
NAWARANGPUR	DABUGAON	12.00	100.00
NAWARANGPUR	NANDAHANDI	55.10	94.55
NAWARANGPUR	TENTULIKHUNTI	70.80	100.00
NAWARANGPUR	PAPDAHANDI	75.00	100.00
NAWARANGPUR	UMERKOT	74.00	100.00
NAWARANGPUR	KOSAGUMUNDA	80.00	100.00
NAWARANGPUR	CHANDHANDI	61.20	100.00
NAWARANGPUR	NAWARANGPUR	85.40	100.00
NAWARANGPUR	RAIGHAR	25.00	NA
NAYAGADA	NAYAGARH	34.00	NA
NAYAGADA	NUAGAON	80.90	100.00
NAYAGADA	GANIA	27.10	100.00
NAYAGADA	KHANDAPADA	26.10	75.97
NAYAGADA	BHAPUR	45.80	100.00
NAYAGADA	DASPALA	22.50	98.74
NAYAGADA	ODAGAON	22.50	100.00
NAYAGADA	RANPUR	41.00	100.00
NUAPADA	KHARIAR	33.30	100.00
NUAPADA	BODEN	23.10	99.40
NUAPADA	NUAPADA	63.30	100.00
NUAPADA	SINAPALLI	60.00	100.00
NUAPADA	KOMNA	60.00	100.00
PURI	KANAS	0.00	NA

ANNEX -3 :TRIANGULATION OF DATA ON SNP RECEIVED FOR 21+ DAYS AT BLOCK LEVEL

DISTRICT	BLOCKS	SNP received for	SNP received for
PURI	DELANGA	40.40	100.00
PURI	SATYABADI	27.70	100.00
PURI	GOPE	20.80	99.65
PURI	KAKATPUR	37.50	13.97
PURI	PURI SADAR	66.00	100.00
PURI	NIMAPARA	20.50	100.00
PURI	BRAHMAGIRI	56.40	100.00
PURI	KRUSHNAPRASAD	52.10	100.00
PURI	ASTARANGA	48.90	100.00
PURI	PIPLI	60.90	100.00
RAYAGADA	MUNIGUDA	68.00	82.73
RAYAGADA	CHANDRAPUR	81.60	100.00
RAYAGADA	RAYAGADA	72.90	82.99
RAYAGADA	PADAMPUR	66.70	99.06
RAYAGADA	KASIPUR	74.00	70.39
RAYAGADA	RAMANGUDA	72.00	97.90
RAYAGADA	K SINGPUR	66.00	100.00
RAYAGADA	GUNPUR	79.20	100.00
RAYAGADA	BISSAM CUTTACK	85.10	100.00
RAYAGADA	GUDARI	72.90	100.00
RAYAGADA	KOLNARA	41.30	100.00
SAMBALPUR	NAKTIDEULA	61.50	100.00
SAMBALPUR	KUCHINDA	79.20	100.00
SAMBALPUR	BAMRA	51.10	100.00
SAMBALPUR	JUJOMARA	58.70	96.77
SAMBALPUR	RAIRAKHOL	60.90	100.00
SAMBALPUR	RENGALI	44.90	100.00
SAMBALPUR	SADAR OR DHANKAUDA	54.50	NA
SAMBALPUR	JAMANKIRA	85.10	100.00
SAMBALPUR	MANESWAR	53.20	100.00
SONEPUR	DUNGURIPALI	87.50	100.00
SONEPUR	TARVA	38.30	100.00
SONEPUR	SONEPUR	34.00	100.00
SONEPUR	ULLANDA	48.70	NA
SONEPUR	BINKA	47.60	100.00
SONEPUR	BIRAMAHARAJPUR	34.00	100.00
SUNDERGARH	KUANRMUNDA	30.40	100.00
SUNDERGARH	KUTRA	80.40	100.00
SUNDERGARH	LATHIKATA	60.40	100.00
SUNDERGARH	RANJGANGPUR	63.30	100.00
SUNDERGARH	HEMGIRI	64.40	100.00
SUNDERGARH	SUBDEGA	68.80	100.00
SUNDERGARH	KOIRA	56.00	86.25
SUNDERGARH	NUAGAON	69.40	100.00

ANNEX -3 :TRIANGULATION OF DATA ON SNP RECEIVED FOR 21+ DAYS AT BLOCK LEVEL

DISTRICT	BLOCKS	SNP received for	SNP received for
SUNDERGARH	BARGAON	58.00	100.00
SUNDERGARH	BISRA	61.90	28.22
SUNDERGARH	TANGARPALLI	78.00	100.00
SUNDERGARH	LAHUNIPARA	49.00	100.00
SUNDERGARH	LEPHRIPADA	53.10	100.00
SUNDERGARH	BALISANKARA	68.00	100.00
SUNDERGARH	GURUNDIA	88.00	100.00
SUNDERGARH	SUNDERGARH SADAR	91.70	100.00
SUNDERGARH	BONAI	37.50	100.00

ANNEX 4 MONTH WISE COVERAGE OF BLOCKS IN CONCURRENT MONITORING OF HEALTH AND NUTRITION VILLAGE LEVEL SERVICES

Districts	Blocks	2010		2011																			
		Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11	
		Nov.	Dec.	Jan	Feb.	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Sept	Oct.	Oct	Nov	Nov	Dec
Cuttack	Cuttack Sadar																						
	Baranga																						
	Kantapada																						
	Niali																						
	Tangi-Chowdwar																						
	Salipur																						
	Nischintakoili																						
	Mahanga																						
	Athgarh																						
	Tigiria																						
	Baramba																						
	Narasinghpur																						
	Banki																						
	Dampara																						
Jajpur	Jajpur																						
	Binjharpur																						
	Korei																						
	Bari																						
	Rasulpur																						
	Dasarathpur																						
	Sukinda																						
	Dangadi																						
	Dharmasala																						

ANNEX 4 MONTH WISE COVERAGE OF BLOCKS IN CONCURRENT MONITORING OF HEALTH AND NUTRITION VILLAGE LEVEL SERVICES

Districts	Blocks	2010		2011																			
		Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11	
		Nov.	Dec.	Jan	Feb.	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Sept	Oct.	Oct	Nov	Nov	Dec
	Badachana															■							
Jagatsinghpur	Jagatsinghpur		■																				
	Raghunathpur						■																
	Biridi-F														■								
	Balikuda																			■	■		
	Nuagaon																			■			
	Tirtol								■														
	Kujang												■										
	Erasma																■						
Kendrapara	Kendrapara	■																					
	Derabis																						■
	Marsaghai																					■	■
	Mahakalapada													■	■								
	Garadpur																■						
	Pattamundai											■											
	Rajnagar								■														
	Aul																					■	
	Rajkanika				■																		
Balasore	Balasore								■														
	Remuna																				■		
	Basta			■	■																		
	Baliapal													■									
	Bhograi																■						
	Jaleswar					■	■																

ANNEX 4 MONTH WISE COVERAGE OF BLOCKS IN CONCURRENT MONITORING OF HEALTH AND NUTRITION VILLAGE LEVEL SERVICES

Districts	Blocks	2010		2011																			
		Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11	
		Nov.	Dec.	Jan	Feb.	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Sept	Oct.	Oct	Nov	Nov	Dec
Bhadrak	Bahanaga																			■			
	Soro						■																
	Simulia									■													
	Khaira	■																					
	Nilgiri												■										
	Oupada																			■	■		
	Bhadrak																			■			
	Bonth							■															
	Basudevpur																					■	
	Tihidi															■							
	Chandabali				■																		
	Dhamnagar												■										
	Bhandari pokhari		■																				
Puri	Krushna-prasad																					■	
	Brahmagiri																■						
	Sadar											■											
	Gop							■	■														
	Kakatpur									■	■												
	Astarang																					■	■
	Nimapara													■									
	Pipili																				■		
	Delang				■																		
	Kanas		■																				

ANNEX 4 MONTH WISE COVERAGE OF BLOCKS IN CONCURRENT MONITORING OF HEALTH AND NUTRITION VILLAGE LEVEL SERVICES

Districts	Blocks	2010		2011																			
		Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11	
		Nov.	Dec.	Jan	Feb.	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Sept	Oct.	Oct	Nov	Nov	Dec
	Satyabadi						■																
Khurda	Bhubaneswar													■									
	Jatni						■																
	Balipatna											■	■										
	Balianta																■						
	Khurda								■														
	Tangi																				■		
	Banpur	■																					
	Bolgarh				■																		
	Chilika										■												
	Begunia																				■		
Nayagarh	Nayagarh		■																				
	Ranpur																	■					
	Odagaon															■	■						
	Nuagaon				■																		
	Khandapada										■												
	Bhapur												■										
	Daspalla													■	■								
	Gania						■																
Mayurbhanj	Rairangpur										■												
	Bijatala				■																		
	Bisoi					■	■																
	Jamda																				■		
	Bahalda																				■		

ANNEX 4 MONTH WISE COVERAGE OF BLOCKS IN CONCURRENT MONITORING OF HEALTH AND NUTRITION VILLAGE LEVEL SERVICES

Districts	Blocks	2010		2011																			
		Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11	
		Nov.	Dec.	Jan	Feb.	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Sept	Oct.	Oct	Nov	Nov	Dec
	Tiring					■																	
	Kusumi			■	■																		
	Baripada				■																		
	Kuliana							■															
	Suliapada	■																					
	Rasgovindpur																			■			
	Morada						■																
	Samakhunta											■											
	Bodasahi															■							
	Bangiriposi							■	■														
	Betnati										■												
	Sarasakana																■						
	Udala																				■		
	Kaptipada										■												
	Khunta						■																
	Gopabandhunagar											■	■										
	Karanjia												■										
	Thakurmunda														■								
	Jasipur				■																		
	Sukruli																					■	
	Raruan														■								
Dhenkanal	Sadar															■							
	Odapada																					■	■
	Gondia									■													

ANNEX 4 MONTH WISE COVERAGE OF BLOCKS IN CONCURRENT MONITORING OF HEALTH AND NUTRITION VILLAGE LEVEL SERVICES

Districts	Blocks	2010		2011																			
		Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11	
		Nov.	Dec.	Jan	Feb.	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Sept	Oct.	Oct	Nov	Nov	Dec
	Hindol		■																				
	Kamakhyanagar																	■					
	Kankadahad																			■			
	Bhuban													■									
	Parjang							■	■														
Angul	Angul														■								
	Banarpal	■	■																				
	Chhendipada								■														
	Talcher																	■	■				
	Kaniha												■										
	Athmallik																			■			
	Kishorenagar						■																
	Pallahara															■							
Bolangir	Bolangir			■	■																		
	Loisinga														■								
	Puintala									■													
	Agalpur																			■			
	Deogaon								■														
	Gudvella									■	■												
	Patnagarh												■										
	Belpara																						■
	Khaparakhol															■							
	Titilagarh																			■			
	Muribahal				■																		

ANNEX 4 MONTH WISE COVERAGE OF BLOCKS IN CONCURRENT MONITORING OF HEALTH AND NUTRITION VILLAGE LEVEL SERVICES

Districts	Blocks	2010		2011																			
		Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11	
		Nov.	Dec.	Jan	Feb.	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Sept	Oct.	Oct	Nov	Nov	Dec
	Saintala	■	■																				
	Bongamunda											■	■										
	Tureikela						■																
Subarnapur	Tarva						■																
	Sonepur										■												
	Dunguripalli		■																				
	Binika																			■			
	Biramaharajpur																			■	■		
	Ullunda														■								
Sambalpur	Dhankhanda																	■					
	Maneswar																					■	
	Jujumura											■	■										
	Rengali															■							
	Rairakhol													■									
	Naktideul		■																				
	Kuchinda				■																		
	Bamra								■														
	Jamankira																			■			
Bargarh	Bargarh																	■	■				
	Barpalli					■																	
	Attabira												■										
	Bhatli				■																		
	Bheden						■																
	Ambabhana																			■			

ANNEX 4 MONTH WISE COVERAGE OF BLOCKS IN CONCURRENT MONITORING OF HEALTH AND NUTRITION VILLAGE LEVEL SERVICES

Districts	Blocks	2010		2011																			
		Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11	
		Nov.	Dec.	Jan	Feb.	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Sept	Oct.	Oct	Nov	Nov	Dec
	Rajborasambar													■									
	Paikmal	■																					
	Jharabandha								■														
	Gaisilet															■							
	Sohela																					■	■
	Bijepur										■												
Keonjhar	Anadapur		■																				
	Hatadihi				■																		
	Ghasipur					■																	
	Champua															■							
	Jhumpura										■												
	Joda																					■	
	Keonjhargarh								■														
	Harichandanpur												■										
	Patna																					■	
	Ghatgaon			■	■																		
	Saharpada										■												
	Telkoi																					■	
	Banspal														■								
Sundargarh	Kuarmunda	■																					
	Nuagaon										■												
	Bisra										■												
	Lathikata						■																
	Lafripada																■						

ANNEX 4 MONTH WISE COVERAGE OF BLOCKS IN CONCURRENT MONITORING OF HEALTH AND NUTRITION VILLAGE LEVEL SERVICES

Districts	Blocks	2010		2011																			
		Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11	
		Nov.	Dec.	Jan	Feb.	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Sept	Oct.	Oct	Nov	Nov	Dec
	Hemgiri								■														
	Rajgangpur						■																
	Kutra			■	■																		
	Sundargarh																				■		
	Bargaon										■												
	Subdega								■														
	Balisankara																				■		
	Tangarpalli											■											
	Lahunipada														■								
	Koira								■														
	Bonaigarh																					■	
	Gurundia																				■		
Jharsuguda	Jharsuguda																			■			
	Lakhanpur																			■	■		
	Kolabira	■																					
	Laikera							■															
	Kirimira													■	■								
Deogarh	Riamal																■						
	Barkote		■																				
	Tileibani																					■	
Kalahandi	Bhawanipatna																				■		
	Kesinga																			■			
	Narla							■															
	M.Rampur					■	■																

ANNEX 4 MONTH WISE COVERAGE OF BLOCKS IN CONCURRENT MONITORING OF HEALTH AND NUTRITION VILLAGE LEVEL SERVICES

Districts	Blocks	2010		2011																			
		Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11	
		Nov.	Dec.	Jan	Feb.	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Sept	Oct.	Oct	Nov	Nov	Dec
	Karlamunda																						
	Lanjigarh																						
	ThumalRampur																						
	Dharmagarh																						
	Junagarh																						
	Jaipatna																						
	Koksara																						
	Kalampur																						
	Golamunda																						
Nuapada	Nawapara																						
	Komna																						
	Khariar																						
	Sinapalli																						
	Boden																						
Ganjam	Rangeilunda																						
	Kukudakhandi																						
	Digapahandi																						
	Sankhemundi																						
	Chikiti																						
	Patrapur																						
	Chhatrapur																						
	Ganjam																						
	Khalikote																						
	Kodala																						

ANNEX 4 MONTH WISE COVERAGE OF BLOCKS IN CONCURRENT MONITORING OF HEALTH AND NUTRITION VILLAGE LEVEL SERVICES

Districts	Blocks	2010		2011																			
		Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11	
		Nov.	Dec.	Jan	Feb.	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Sept	Oct.	Oct	Nov	Nov	Dec
	Purusottampur																						
	Hinjilicut																						
	Polsara																						
	K.S.Nagar																						
	Bhanjanagar																						
	Belguntha																						
	Jagannathprasad																						
	Buguda																						
	Aska																						
	Seragad																						
	Dharakote																						
	Surada																						
Gajapati	Kasinagar																						
Gajapati	Paralakhemundi																						
Gajapati	Rayagada																						
Gajapati	Gumma																						
Gajapati	R.Udayagiri																						
Gajapati	Mohana																						
Gajapati	Nuagad																						
Gajapati	Total																						
Koraput	Koraput																						
Koraput	Similiguda																						
Koraput	Pottangi																						

ANNEX 4 MONTH WISE COVERAGE OF BLOCKS IN CONCURRENT MONITORING OF HEALTH AND NUTRITION VILLAGE LEVEL SERVICES

Districts	Blocks	2010		2011																			
		Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11	
		Nov.	Dec.	Jan	Feb.	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Sept	Oct.	Oct	Nov	Nov	Dec
	Laxmipur																						
	Nandapur																						
	Bandhugaon																						
	Narayanpatna																						
	Lamtaput																						
	Dasmantpur																						
	Jeypore																						
	Kotpada																						
	Kundara																						
	Bariguma																						
	Boipariguda																						
Malkanagiri	Malkangiri																						
	Korkunda																						
	Podia																						
	Khairaput																						
	Kudumulugum a																						
	Kalimela																						
	Mathili																						
Rayagada	Rayagada																						
	Kasipur																						
	Kolnara																						
	K.Singpur																						
	Gunupur																						
	Gudari																						

ANNEX 4 MONTH WISE COVERAGE OF BLOCKS IN CONCURRENT MONITORING OF HEALTH AND NUTRITION VILLAGE LEVEL SERVICES

Districts	Blocks	2010		2011																			
		Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11	
		Nov.	Dec.	Jan	Feb.	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Sept	Oct.	Oct	Nov	Nov	Dec
	Bisam-Cuttack																	■	■				
	Chandrapur			■	■																		
	Muniguda	■	■																				
	Ramanguda											■											
	Padmapur								■														
Nawrangpur	Nawrangpur																				■		
	Umerkote												■										
	Tentulikhunti							■															
	Chandahandi															■							
	Kosagumuda														■								
	Papadahandi										■												
	Jharigam	■	■																				
	Dabugaon				■																		
	Raighar																			■			
	Nandahandi						■																
Kandhamal	Balliguda																					■	
	Chakpad												■										
	Daringibadi				■																		
	G.Udayagiri						■																
	Kotgarh														■								
	Nuagaon			■	■																		
	Raikia							■															
	Tikabali																				■		
	Tumudibandh										■												

ANNEX 4 MONTH WISE COVERAGE OF BLOCKS IN CONCURRENT MONITORING OF HEALTH AND NUTRITION VILLAGE LEVEL SERVICES

Districts	Blocks	2010		2011																			
		Month 1		Month 2		Month 3		Month 4		Month 5		Month 6		Month 7		Month 8		Month 9		Month 10		Month 11	
		Nov.	Dec.	Jan	Feb.	Feb	Mar	Mar	Apr	Apr	May	May	Jun	Jun	Jul	Jul	Aug	Sept	Oct.	Oct	Nov	Nov	Dec
	Phulbani																						
	Phiringia																						
	Khajuripada																						
Boudh	Boudh																						
	Harabhanga																						
	Kantamal																						