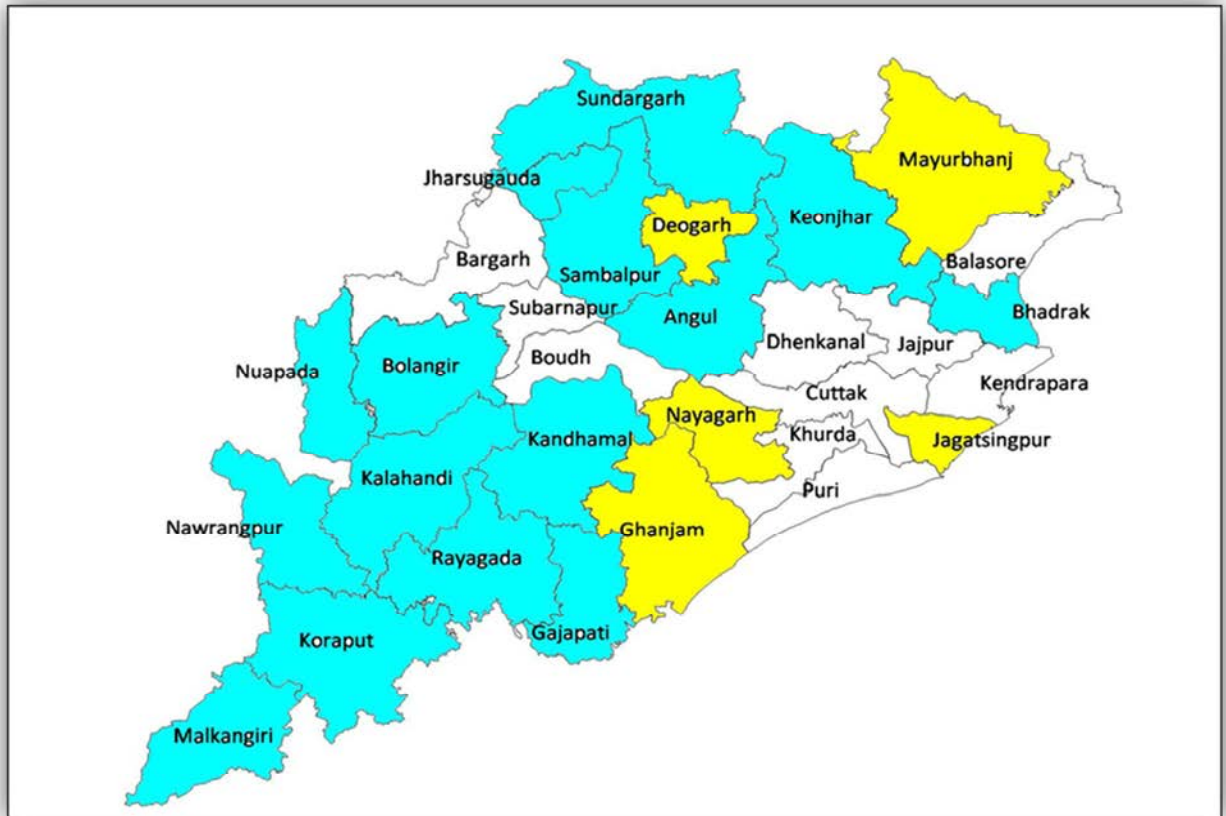


DEPARTMENT OF WOMEN & CHILD DEVELOPMENT
GOVERNMENT OF ORISSA

ORISSA TECHNICAL & MANAGEMENT SUPPORT TEAM

AUGUST – 2011



**SUMMARY OF NUTRITION BASELINE SURVEY IN 15 HIGH BURDEN
AND 5 NON-HIGH BURDEN DISTRICTS OF ORISSA**

Carried out by ORG Centre for Social Research, a division of the Nielsen Company (data collected during the period of September 2010 to March 2011)

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LIST OF ACRONYMS USED

ACRONYMS	DETAILS
ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AWC	Anganwadi Centre
AWW	Anganwadi Workers
BCG	Bacillus Calmette Guerin
CDPO	Child Development Project Officer
DFID	Department For International Development
DLHS	District Level Household and Facility Survey
DPMU	District Programme Management Unit
DPT	Diphtheria, Pertussis, Tetanus
DSWO	District Social Welfare Officer
DWCD	Department of Women and Child Development
HBD	High Burden District
ICDS	Integrated Child Development Service
IFA	Iron Folic Acid
JSY	Janani Suraksha Yojana
MIS	Management Information System
NCHS	National Centre for Health Statistics
NFHS	National Family Health Survey
NGO	Non Government Organisation

ACRONYMS	DETAILS
NHBD	Non-High Burden District
NOP	Nutrition Operational Plan
ORS	Oral Rehydration Solution
PHC	Primary Health Centre
PPS	Probability Proportional to Size
PRI	Panchayati Raj Institutions
RCH	Reproductive and Child Health
SC	Schedule Caste
SD	Standard Deviation
SNP	Supplementary Nutrition Programme
ST	Schedule Tribe
TBA	Traditional Birth Attendant
THR	Take Home Ration
TT	Tetanus Toxoid
WHO	World Health Organization

EXECUTIVE SUMMARY

In Orissa, the percentage of children below three years who are underweight declined by 10.8 percentage points (from 50.3% to 39.5%) between NFHS-2 and NFHS-3, while the overall average for all India declined by only 2.3 percentage points during the same period. From 2010, the Department of Women and Child Development (DWCD), Orissa has been implementing a Nutrition Operation Plan (NOP, 2010-2015), with DFID support, the objective of which is to reduce under-nutrition. The NOP has a clear goal, objectives, strategies, principles and targets which are complementary to those of the Integrated Child Development Service (ICDS). The main focus has been on 15 high burden districts, identified from a composite index of vulnerability indicators, such as schedule tribe concentration, poverty and illiteracy. The Nutrition Baseline Survey was conducted to establish:

- **Nutritional status of children up to six years of age**
- **Coverage of micronutrient supplements, such as Vitamin A, IFA and iodised salt**
- **Prevalence of anaemia among children, pregnant women and adolescent girls**

Nutrition Out come	HBD	NHBD	NFHS 3 (Rural)	DLHS 3 (Rural)
	Figures are given in %			
Underweight Children	39.3	32.4	42.3	
Stunted Children	40.6	35.5	46.5	
Wasted Children	22.8	24.7	20.5	
Anaemia among Children	65.5	54.6	66.6	
Anaemia among Pregnant Women	58.0	52.9		
Anaemia among Adolescent Girls	73.4	65.7		
Family using Iodized Salt	56.6	45.6		
One dose of Vitamin A	83.6	79.5		71.2
Breast feeding within one hour of birth	71.3	70.7	54.9	63.7
Exclusive Breastfeeding till 6 months	57.8	64.9		42.3
Timely initiation of Complementary Feeding	84.5	78.9		59.9
Complete Immunization	65.9	69.7	51.6	61.0

The survey was conducted in 15 high burden districts and five non-high burden districts, by ORG Nielsen on behalf of the Department. It shows the data levels by comparison with NFHS III and DLHS III, and also a number of other indicators, such as awareness related to various behaviours and practices, service delivery, coverage of services and knowledge of service providers, which had not previously been collected, either as evaluated data or through routine internal reporting mechanisms. This has clearly highlighted the ground reality of the current situation for nutrition and its determinants, and has identified areas needing immediate attention. The study is statistically significant in nature and provides district level

disaggregated nutrition data.

The results are very encouraging, showing a decreasing trend in underweight and stunting across the state and corroborating indicators such as initiation of breast feeding, complementary feeding, Vitamin A supplementation and immunisation, compared with NFHS III and DLHS III. However, wasting among children has increased, which is a matter of great concern. The prevalence of anaemia among children, adolescent girls and pregnant women is also of concern, as it has not changed, despite programmes for IFA supplementation over many years.

The data has also reconfirmed the findings from NFHS about the correlation of caste, class and literacy with under nutrition. However, although the overall gap between the nutritional status of children in high burden and non-high burden districts remains quite high, differences among other coverage and behaviour indicators are not as great as expected. This raises issues related to other determinants, such as water, sanitation, disease and its overall impact, as well as underlying causes of malnutrition like access, knowledge and practice.

This data has been shared at forums such as the ICDS Task Force, programme officers' meeting and District Programme Management Unit (DPMU) review meeting, with an independent source of data (concurrent monitoring, commissioned jointly by the DWCD and Department of Health) and the DWCD has decided to further disseminate at district level to support planning. This study will be the base document for assessing the progress and impact of the NOP.

BACKGROUND

Chronic under-nutrition affects one in three children in developing countries. Every year it causes the death of more than three million children and more than 100,000 mothers. Under-nutrition weakens the immune system, making children more susceptible and vulnerable to diseases such as malaria, measles, respiratory infections and diarrhoea. Conversely, infections can also trigger under-nutrition and the vicious circle of under-nutrition/ repeat infections/ under nutrition needs to be broken through integrated health, water and sanitation and nutrition programming. Child under-nutrition has intergenerational effects. It increases the risk of anaemia, morbidity/mortality during pregnancy and childbirth and increases the likelihood of the newborn being of low birth weight, which has lifelong adverse affects on health and development. Child under-nutrition limits school performance and evidence shows that adults who were undernourished in childhood earn significantly less and contribute less to economic growth. Under-nutrition reduces GDP by at least 2-3percent.¹

India, which is fast emerging as an economic super power of the world, with impressive economic growth in recent years, is facing a “silent emergency”² and a human disaster because of the under-nutrition of its children, which remains a threat to their survival, growth and development, although largely invisible. Out of 2.1 million children under five years who die in India annually, half (1.1 million) of the deaths can be attributed to under-nutrition.

Rates of child under-nutrition in India are among the highest in the world. Over 25 million Indian children, 20 percent of those under five years old, are wasted³ (acutely undernourished) and 61 million children, 48 percent of those under five years old, are stunted (chronically undernourished) (NFHS-3). The adverse effects of under-nutrition in the first two years of life are irreversible (Lancet, 2003). Describing the high under-nutrition among children in India as a “national shame”, the Prime Minister, in his Independence Day speech of 2008, said that it is a “curse that we must remove”. The prevalence of child wasting in India (23%) is twice as high as than that in sub-Saharan Africa (9%) and ten times higher than in Latin America (2%). The prevalence of child stunting in India (45%) is four times higher than that in China (11%).

In Orissa, the percentage of children below three years who are underweight declined by 10.8 percentage points (from 50.3% to 39.5%) between NFHS-2 and NFHS-3, while the overall average for all India declined only by 2.3 percentage points during the same period. This better performance of Orissa in addressing under-nutrition can be attributed to greater efficiency in

¹ The neglected crisis of under nutrition DFID strategy

² In 1998, UNICEF in its “State of the World’s Children” Report described under nutrition among children in the world as a silent emergency

³ Wasting refers to too thin for height, stunting is too short for age and under weight is too thin for age. These are the 3 most commonly used anthropometric indices for measuring child under nutrition.

weighing children below six years (56.1% in Orissa compared to the national average of 18.2% (NFHS-3)); and better child feeding practices (Sharma *et al*, IDS Bulletin, July 2009).

NUTRITION OPERATIONAL PLAN (2010-2015) ORISSA INITIATIVE

Orissa performed better than the Indian average in terms of rate of reduction of under-nutrition (10% over seven years NFHS), but despite all the State initiatives, 41 percent of the children under five years remain underweight (NFHS III) which is unacceptably high. This prompted the Department of Women and Child Development (DWCD) to develop an evidenced based Nutrition Operational Plan (NOP).

Goal	Objectives
To achieve maximum nutritional health for all children <u>below six years of age</u> , especially from the poorest and the most disadvantaged, through effective inter-sectoral coordination	<p>Bring down under-nutrition among children from current levels of:</p> <ul style="list-style-type: none"> i) Underweight from 41 percent to 25 percent, focusing on Schedule Tribes, with an average annual reduction of 3.5 percent ii) Stunting from 45 percent to 35 percent, with an average annual reduction of 2.5 percent iii) Wasting from 20 percent to 10 percent, with an average annual reduction of 2.5 percent

Preparation of the plan was supported by an independent study to corroborate data from various independent surveys, such as NFHS and DLHS, review of the Management Information System (MIS) and review of literature. This identified the multiplicity of causes of under-nutrition in the State, including the likely contribution of malaria (Orissa has the highest incidence in the country) and successful approaches that produced improvements in nutritional status within India and internationally.

The key is targeting the most socially vulnerable (Schedule Tribe (ST) and Schedule Caste (SC) communities) and the most nutritionally vulnerable (0-2 years) in the 50 percent highest burdened districts in the State. Strategic priorities have been developed in a consultative manner to address operational gaps, quality of care and additional actions needed to bridge gaps. **The NOP aims to achieve measurable changes in key under-nutrition related components by the end of the programme.**

OBJECTIVE OF THE BASELINE

The major objective of the Nutrition Baseline Survey was to create current district level indicators for high burden districts that were not available from other evaluation surveys (such as NFHS (2005-6) and DLHS III (2007-8)) and were dated. The baseline will also help to gauge the pace and progress in set indicators at mid-term and final evaluations, and thus the outcome and impact of the NOP.

SCOPE OF THE BASELINE

In order to establish the baseline values against which the progress of the programme and the impact of various inputs can be measured, the survey was carried out in 20 districts, including 15 high burden districts (Anugul, Bhadrak, Balangir, Gajapati, Jharsuguda, Kalahandi, Kandhmal, Keonjhar, Koraput, Malkangiri, Nawarangpur, Nuapada, Rayagada, Sambalpur and Sundergarh) and five non-high burden districts (Deogarh, Ganjam, Jagatsinghpur, Mayurbhanj and Nayagarh). The broad objectives of the survey were to assess both qualitative and quantitative service indicators, as shown below.

<i>Quantitative Assessment of Services</i>	<i>Qualitative Assessment of Services</i>
<ul style="list-style-type: none"> ✦ Nutritional status of children up to 6 years of age ✦ Coverage of micronutrient supplements such as, Vitamin A, IFA and iodised salts ✦ Prevalence of anaemia among children, pregnant women and adolescent girls ✦ Child feeding practices 	<ul style="list-style-type: none"> ✦ Type of advice received from AWW on infant and young child feeding and health care. Regularity and content of the outreach services in the village ✦ Knowledge and attitude of beneficiaries/guardians regarding nutrition needs and care ✦ AWW perceptions about their roles and responsibilities - linkages with ANM and ASHA ✦ Existing support system, such as supervision, training and feedback mechanisms ✦ Knowledge, attitudes and practices of AWWs, Supervisors and Managers

SURVEY DESIGN AND METHODOLOGY

The survey collected data from primary and secondary sources using two research approaches:

1. **Survey of Beneficiaries:** Individual interviews of a sample of heads of households were carried out to provide household profiles. For information on health and nutrition standards, mothers of children under six years, currently pregnant women and adolescent girls (11 - 19 years) were interviewed. Focus group discussions were undertaken to understand community perceptions, factors governing utilisation and community uptake of

various services available at the Anganwadi Centres (AWC). Anthropometry measurement and haemoglobin testing was carried out using standard equipment and procedures to detect anaemia among sampled children, pregnant women and adolescent girls.

- 2. Survey of service delivery systems and related issues:** Individual interviews of selected AWWs, Child Development Project Officers (CDPO) and District Social Welfare Officers (DSWO) were carried out to assess their knowledge, attitudes and practices. Information was also collected on training plans for Anganwadi Workers (AWW) and Auxiliary Nurse Midwives (ANM), equipping AWCs with basic infrastructure and supplies and improving service delivery, including information about key constraints and suggestions.

SAMPLING OF BENEFICIARIES

The minimum sample required for each of the key indicators was worked out following the NFHS III estimates of P_1 - the estimated proportion at the time of 1st survey and P_2 - the target proportion at some future date.

SELECTION OF DISTRICTS AND BLOCKS

In addition to the 15 High Burden Districts (HBD), five Non-High Burden Districts (NHBD) with similar characteristics were selected as controls. A three-stage stratified sampling design was adopted for selection of beneficiaries. The number of projects selected for the survey was decided using the Probability Proportional to Size (PPS) method, based on the total number of projects operational for more than two years in the district. On this basis, 86 projects were selected, including 65 from high burden districts and 21 from non-high burden districts.

SELECTION OF ANGANWADI CENTRES

A total of 33 AWCs were selected in each district, using systematic random sampling techniques. These 33 AWCs were distributed proportionately among the selected projects based on actual number of AWCs in that project. However, due to Maoist problems in Malkangiri district three of the AWCs could not be visited, bringing the total number of AWCs covered to 657.

SELECTION AND COVERAGE OF BENEFICIARIES

The selection of beneficiaries (covering users as well as non-users) was also based on the systematic random sampling procedure, using household listing information. Where there was no information available on non-users, the shortfall was covered from the user category. The coverage of beneficiaries in different categories against plan is as follows:

SURVEY TOOLS AND QUALITY CONTROL

Bilingual questionnaires were developed to collect data from different categories of respondents and finalised after field testing. Personnel with prior survey experience in the area of Reproductive and Child Health were recruited for carrying out the tasks of listing, investigation, supervision and research. Training on content, process and quality control was provided, and appropriate data collection was ensured through intense monitoring and screening of completed questionnaires by supervisors before exit from the AWCs. The survey findings were computed in a tailor made CS Pro software module with range checks and filters after field and office editing. Analysis

Particulars	Total Achieved
Interview of 0-71 months children's mothers	12,369
Interview of currently pregnant women	2,443
Interview of adolescent girls	3,564
Focus group with currently pregnant women and mothers of 0-71 months children	37
In depth interview of AWWs	555
Observation of the AWC	555
In depth discussion with representatives of PRI/GKS	276
In depth interview of ANM	41
In depth discussion with CDPO	77
In depth discussion with DSWO/PO	15

has been using SPSS 17.0 package with chi-square tests of statistical significance as appropriate. Coverage check and quality control were ensured at data entry and analysis points.

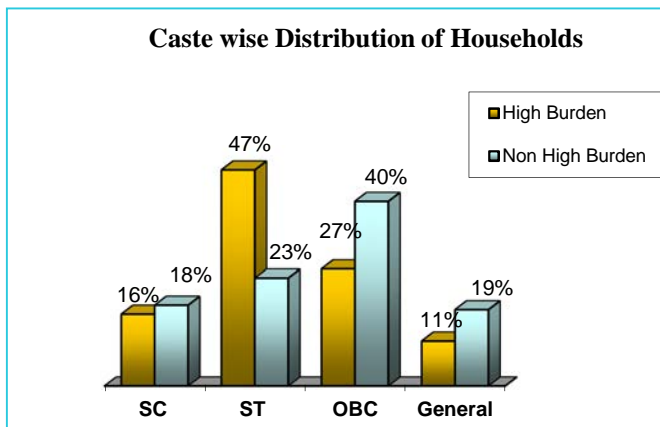
LIMITATIONS OF THE STUDY

Due to the universal distribution of ICDS, around 20,000 AWCs have been newly created in the State. This created a challenge to collecting data from the old AWCs, as the division was based on population figures. Collection of data related to behaviours and practices such as breastfeeding, exclusive breastfeeding and complementary feeding by mothers is always a major challenge and information given may not be the reality. Difficulty in access to areas caused by geographical remoteness and locally active political insurgents prevented collection of data in few centres.

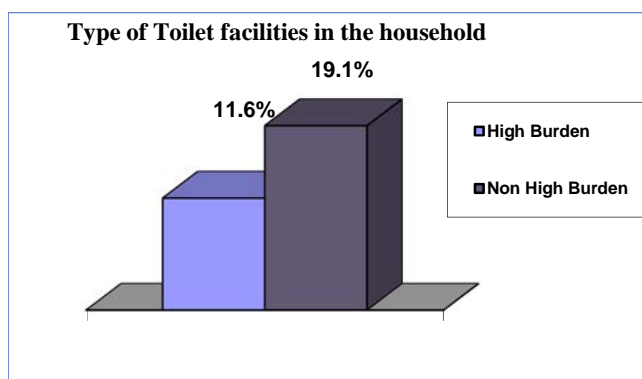
BASELINE SURVEY FINDINGS

PROFILE OF THE HOUSEHOLDS AND RESPONDENTS

1. A higher proportion of heads of household in HBDs (39%) were found to be illiterate than in NHBDs (28%). More than 90% of households are Hindu in both HBDs and NHBDs. Around half (47%) of the sampled households in HBDs are ST and 16% SC, compared with 23% and 18% respectively in the NHBDs.



2. 41% of the heads of households in HBDs and 35% in NHBDs are working as labourers. A sizeable proportion of population in both the HBDs and NHBDs are cultivators. The average monthly household income is comparatively lower in HBDs (Rs.3,838/-) than NHBDs (Rs.5,251/-). The proportion of households belonging to lower wealth quintiles is much higher in the HBDs (22%) than in NHBDs (15%).



3. The average family size is 5.7 in HBDs and 6.9 in the NHBDs. No wide gap was found in the proportion of male to female children in HBDs or NHBDs.

4. The public hand pump is the main source of drinking water in both HBDs and NHBDs (63% and 46% respectively) and household toilet facilities are not available for 88% and 81% respectively of families of the HBDs and NHBDs.

5. Around half (49%) of the selected mothers of children 0 to 71 months are illiterate in HBDs, compared with 30% in NHBDs.

6. A considerable proportion of adolescent girls have passed the middle level of schooling in both HBDs and NHBDs (36% and 48% respectively).

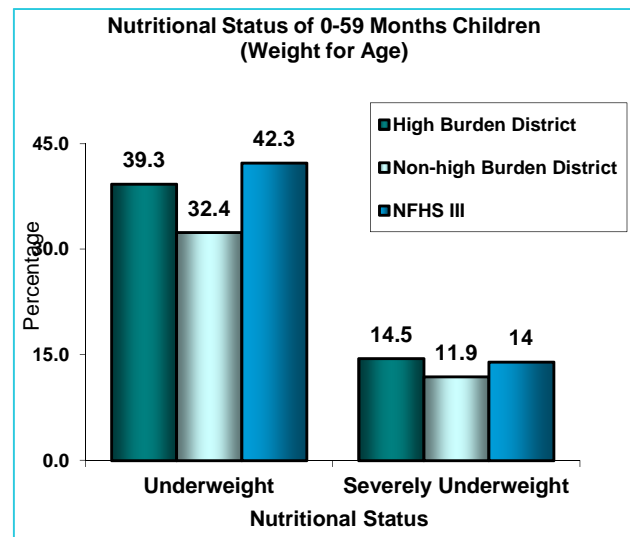
7. The percentage of AWWs residing in the same village is more in NHBDs (85%) than in HBDs (79%) and it takes an average of 36 and 24 minutes respectively for the AWWs of HBDs and NHBDs to reach the AWC.

8. Against only 9% of AWWs in HBDs, 25% in NHBDs are graduates. Most of the AWWs in HBDs are educated up to 8th standard.

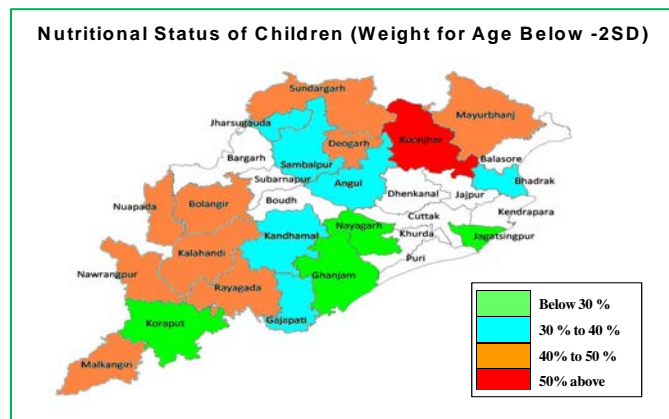
NUTRITIONAL STATUS, FEEDING PRACTICES, TREATMENT OF ILLNESS, IMMUNISATION COVERAGE AND PREVALENCE OF ANAEMIA AMONG CHILDREN

The nutrition baseline survey indicates remarkable improvements in a number of health and nutrition parameters, especially in child feeding practices, antenatal care services, institutional deliveries and use of supplementary nutrition services. However, the survey has been able to identify gaps and shortcomings that need to be prioritised for better implementation of the programme.

1. In the HBDs, almost two-fifths of children (39%) under age five are underweight and 41% are stunted. The proportion of children who are severely underweight is also high, with 15% severely underweight and 20% severely stunted. In the NHBDs 32%, 36% and 25% of the children are underweight, stunted and wasted respectively. The proportion who are underweight is high among the children of ST community and from families in the lower wealth quintile.



2. A large proportion of children (71%) under 23 months were given the mother's milk within an hour of birth in both the HBDs and NHBDs, but a higher proportion (21%) of mothers of children under 23 months in HBDs reported discarding the first milk before starting breastfeeding, compared with 17% in NHBDs.

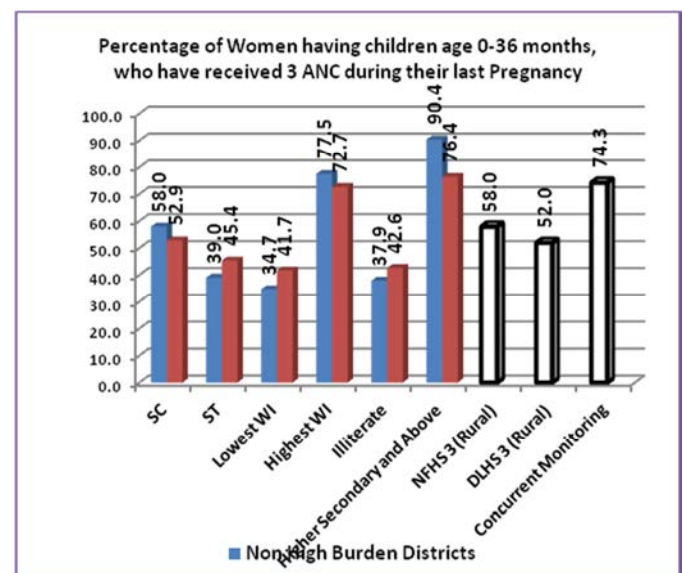
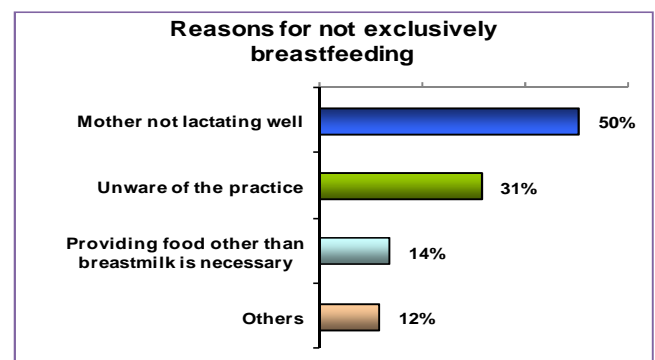


3. The status of exclusive breastfeeding for the first six months is not satisfactory in HBDs or NHBDs (58% and 65% respectively among children of 6 to 23 months). When probed about the reason, 50% of the mothers reported not lactating well and so gave the child complementary feeding with breast milk. Around 85% mothers in HBDs and 79% in NHBDs stated that they started feeding the child with semi-solid foods when it was six to eight months old.
4. The receipt of IFA tablets for 6-71 months children was not good in HBDs or NHBDs (56% and 47% respectively). The proportion of children who had consumed a dose of deworming tablets was higher in HBDs (50%) than NHBDs (43%).
5. The prevalence of anaemia among children in the age group of 6-59 months was very high across all the districts, at 66% in the HBDs and 55% in NHBDs. Children in the disadvantaged groups had higher prevalence, as did children in the lower wealth quintiles.

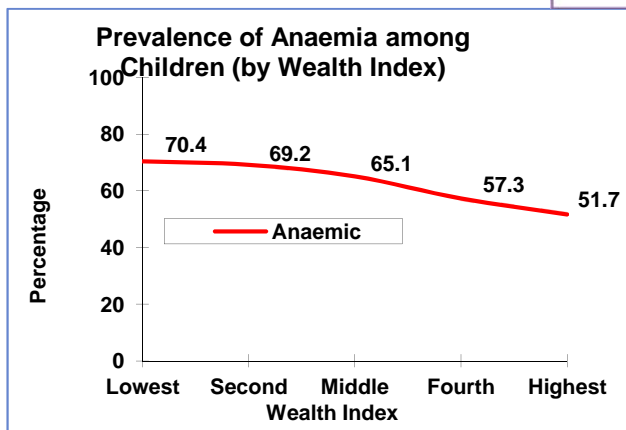
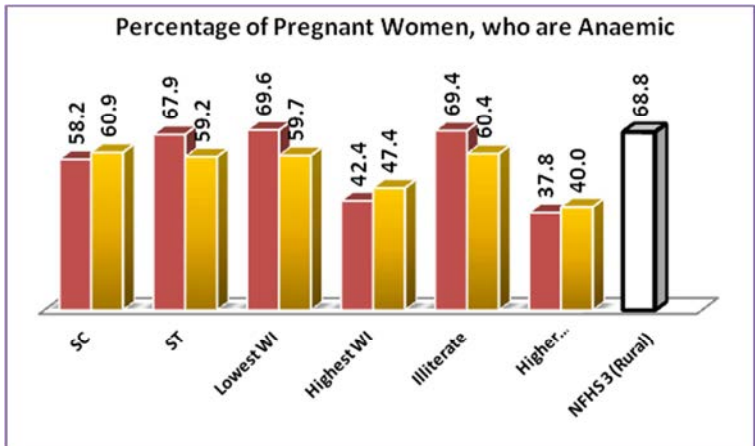
6. Around 70% of the children in the age group 12-23 months were fully immunised in NHBDs against 66% in the HBDs. However, 84% of the children of 9-59 months in the HBDs reported receipt of the first dose of Vitamin A, compared with 80% in the NHBDs.
7. Among children under 71 months, 42% and 38% in the HBDs and NHBDs respectively had fallen ill during the reference period of the preceding two weeks. The most common health problem in both cases was fever, followed by cough, running nose and acute respiratory infection. Around 5% of the children in both HBDs and NHBDs reportedly suffered from diarrhoea in the past two weeks, with 78% and 66% of them respectively being given oral rehydration solution during diarrhoea episodes.
8. Of the children under 71 months, 23% in the HBDs and 21% in NHBDs had undergone a test for malaria. Among these, 52% in the HBDs and 66% in NHBDs were diagnosed as having the disease.

MATERNAL HEALTH

1. A higher proportion of the currently pregnant women in the HBDs (97%) than the NHBDs (94%) reported registration of the pregnancy. About 45% of those in HBDs had registered in the first trimester of pregnancy (0-3 months) and more than half (54%) had registered in the second trimester. Almost 96% of the currently pregnant women had got their pregnancies registered at the AWCs.
2. Almost equal proportions of currently pregnant women in HBDs (85%) and NHBDs (86%) had received antenatal care. 44% of currently pregnant women in HBDs had three or more check-ups, compared with 42% in NHBDs.
3. The proportion of currently pregnant women who had received two or more doses of Tetanus Toxoid was higher in HBDs (74%) than in NHBDs (68%).
4. A large proportion of currently pregnant women in HBDs (93%) and NHBDs (88%) had received IFA tablets. Although the distribution of the IFA tablets was better in the HBDs than in NHBDs, compliance with regular intake of the tablets was better in the NHBDs.



5. Most of the mothers (over 97%) of 0-3 year-old children had registered their last pregnancy in both HBDs and NHBDs; 44% registered in the first trimester of pregnancy, while more than half (54%) had registered in the second trimester. In HBDs, 85% had received at least one ANC check-up during the pregnancy with the index child, and in NHBDs 89% had. A majority (93%) of women in HBDs had received at least two doses of TT vaccine during the pregnancy



with the index child. The proportion of women who received IFA tablets was high across HBDs (93%) and NHBDs (88%).

6. A considerable proportion of mothers in HBDs (40%) and less in NHBDs (20%) reported delivering the index child at home. Institutional delivery levels were quite low in the HBDs, compared with NHBDs.

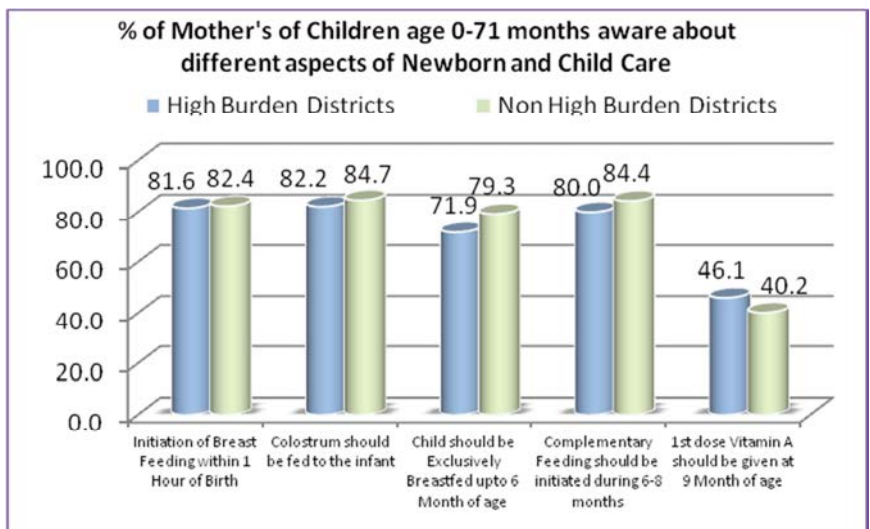
7. Prevalence of anaemia among pregnant women was found to be higher in

the HBDs (58%) than the NHBDs (53%), and was also higher among disadvantaged groups such as SC and ST. Prevalence of anaemia declined with the increase in wealth index of the household.

8. Prevalence of anaemia among adolescent girls in the HBDs was 73% compared to 66% in the NHBDs. Caste-wise analysis of prevalence of anaemia among adolescent girls revealed higher prevalence among disadvantaged groups like SCs and STs. Prevalence of anaemia among adolescent girls was found to be more in the lower wealth quintile.

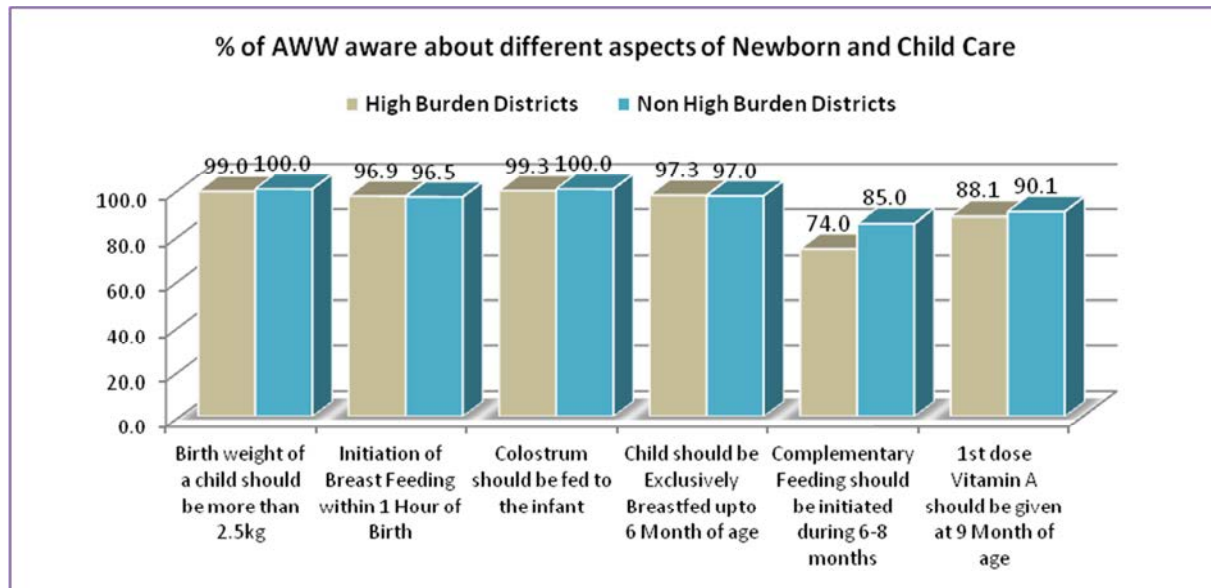
AWARENESS ON NUTRITION

- 61% of the mothers of 0-6 years children in HBDs, 60% in NHBDs and half the currently pregnant women were aware of the need for increased food intake during pregnancy.
- 91% of mothers in HBDs and 94% of those NHBDs



supported continuous monitoring of the weight of pregnant women.

3. A significant proportion of mothers of children 0-6 years and currently pregnant women thought expectant mothers suffering from anaemia should take two IFA tablets per day, as recommended, to compensate for the iron deficiency. The awareness of mothers about feeding practices is good, but it is low regarding vitamin A, only 33% among currently pregnant women. Only 24% of the mothers in HBDs and 18% in NHBDs were aware of the fact that the vitamin A doses should be repeated every six months.



4. Only 45% of mothers in HBDs and 50% in NHBDs were found to be aware that the first milk of mother is rich in vitamin A and proteins. Further, only 39% in HBDs and 28% of mothers in NHBDs were aware that the mother's first milk develops immunity in the child against diseases.
5. The awareness among the AWWs related to feeding practices, birth weight and vitamin A is very good, but awareness about complementary feeding is lower. Most of the AWWs (94%) in both HBDs and NHBDs knew that a woman should eat more than normal during pregnancy; 77% of AWWs in HBDs and 82% in NHBDs were aware that Oral Rehydration Solution (ORS) should be provided to the child suffering from diarrhoea. Overall, the awareness of AWWs related to treatment of diarrhoea was comparatively less in HBDs than in NHBDs.
6. Just over half (54%) of mothers in HBDs and 44% in NHBDs were aware that a child suffering from diarrhoea should be given ORS. Similarly only 54% of the currently pregnant women in HBDs and 44% in NHBDs were aware that ORS solution should be administered to a child suffering from diarrhoea.
7. Only 38% of the mothers of children in HBDs and 34% in NHBDs were aware that children should be given IFA supplements regularly in order to prevent/reduce deficiency of iron. Awareness that regular small doses of IFA supplementation can help prevent anaemia

among children was low among pregnant women in both HBDs and NHBDs (40% and 33% respectively).

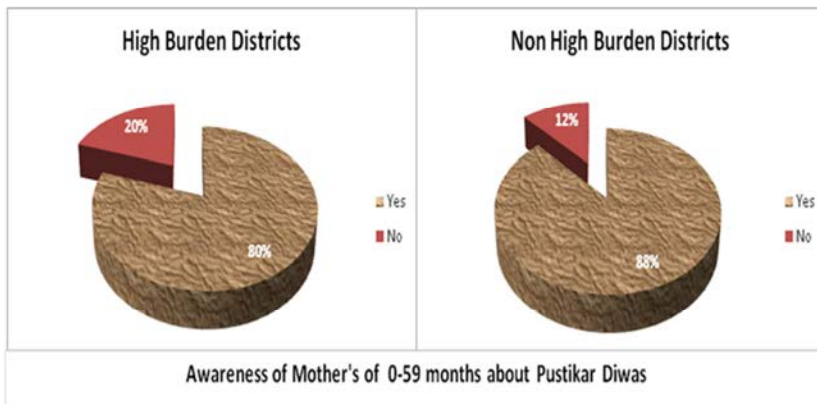
8. Among adolescent girls, 57% in HBDs and 58% in NHBDs were aware of the fact that breastfeeding should be initiated within one hour of child's birth. Only 49% of the adolescent girls in the HBDs and 45% in NHBDs were aware of the importance of colostrum feeding.
9. Awareness that exclusive breastfeeding means feeding only mother's milk and nothing else, not even water, was low among adolescent girls in both HBDs (71%) and NHBDs (73%); 62% of the adolescent girls in HBDs and 57% in NHBDs were aware that the child should be exclusively breastfed for six months.

COVERAGE OF ICDS SERVICES

1. The average population covered by an AWC in NHBDs (890) is more than in HBDs (670). The total number of beneficiaries covered per AWC was 131 in the HBDs and 134 in the NHBDs.
2. Among the sampled children in the age group of 0-71 months, 98% in both HBDs and NHBDs were registered with the AWC, and 39% of the children in HBDs and 38% in NHBDs were attending the AWC on a daily basis.
3. A considerable proportion of the children (91%) in both HBDs and NHBDs were receiving supplementary nutrition from the AWC. In the HBDs, the average number of days in a month the child received food was 23 while in NHBDs, it was 22.
4. Spot feeding was received by 85% children in the HBDs and 81% in the NHBDs. Take Home Rations (THR) were provided to 89% of children in the HBDs and 88% in the NHBDs.
5. Regular growth monitoring of children was reported by 75% in HBDs and 69% in NHBDs. According to the mothers' reports, growth charts were maintained at the AWC for 51% of the children in HBDs and 43% in NHBDs.
6. Most of the mothers reported that during the last three months the AWW had visited their home at least twice. More advice was provided by AWWs in HBDs (45%) than in NHBDs (25%), reflecting better engagement of AWWs with the target groups in HBDs. About 45% of mothers in HBDs and 25% in NHBDs were found to have received some advice on child health and nutrition from the AWW.

7. Only 34% of the mothers in HBDs and 32% in NHBDs said they knew the nutritional status of their children.

8. Around 13% children in the age group 36-71 months in HBDs and 12% in NHBDs do not go anywhere for pre-school education.



9. Many mothers were completely unaware of Mamata Diwas (65% in HBDs and 63% in NHBDs). Among currently pregnant women, 43% in HBDs and 25% in NHBDs were found to be aware of it. Among the pregnant women aware of Mamata Diwas, 82% in HBDs and 75% in NHBDs reported having attended the programme.

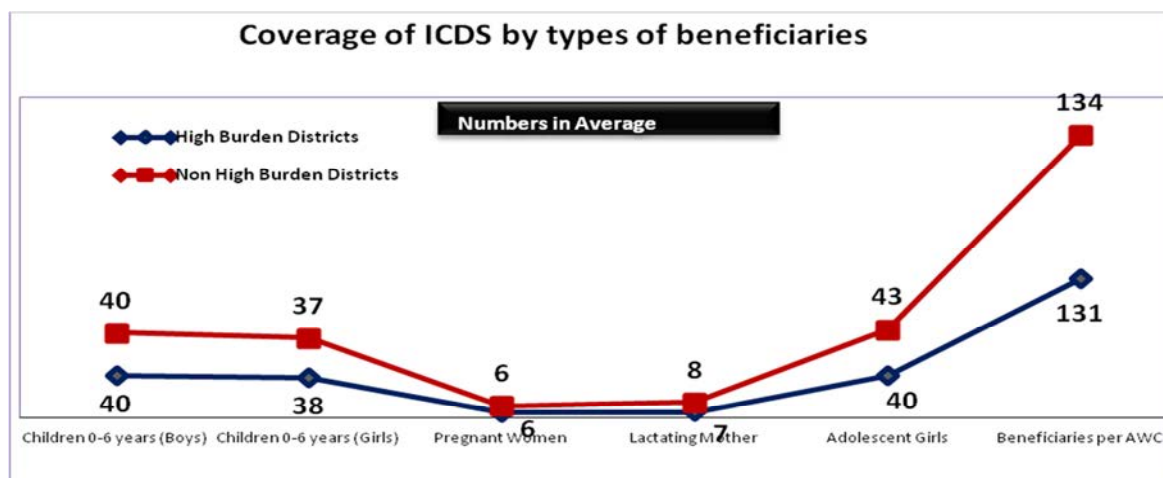
10. A majority in both HBDs (80%) and NHBDs (88%) were also completely unaware of Pustikar Diwas, specifically 81% of the pregnant women in HBDs and 95% in the NHBDs.

11. More pregnant women were weighed during pregnancy in the HBDs (78%), compared to 70% in the NHBDs. Around 62% of the women in HBDs and 58% in NHBDs reported having their weight measured every month.

12. 62% of the pregnant women in HBDs and 58% in NHBDs had visited the AWC every month and about 26% in both the HBDs and NHBDs had visited bi-monthly; 90% of the currently pregnant women in HBDs and 83% in NHBDs registered for the ICDS services reported receiving supplementary food in the last month.

13. 27% of the adolescent girls in HBDs and 24% in NHBDs reported consuming de-worming tablets; 20% of the adolescent girls in the HBDs and was 18% in HBDs had got their blood tested.

14. 22% of the adolescent girls in HBDs, against only 8% in the NHBDs, reported having received any training under the ICDS. Most of these had received training on health and nutrition.



15. 57% of the adolescent girls in HBDs and 81% in NHBDs reported receipt of IFA tablets.

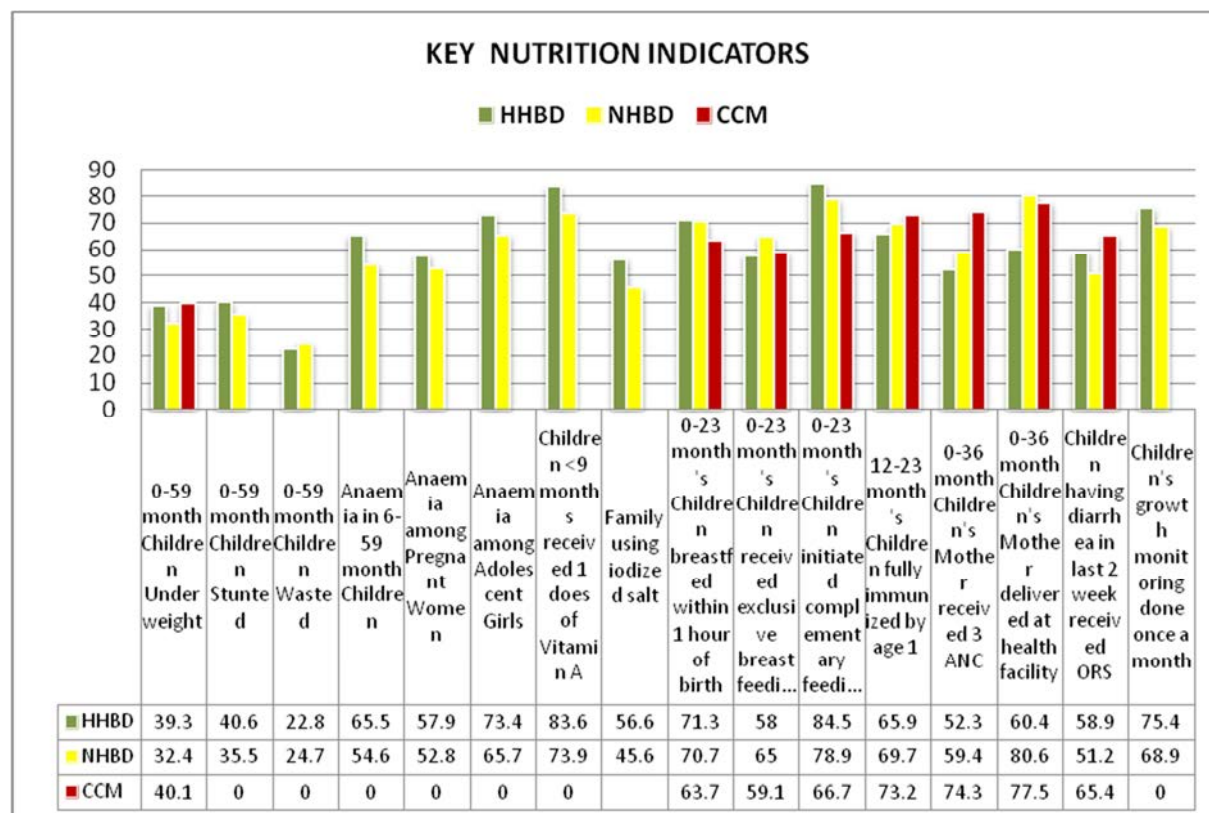
ICDS RESOURCES

- In 41% of the AWCs in the HBDs a drinking facility was available, whereas in the NHBDs only 39% AWC had the facility. Toilets were available only in 30% of AWCs in HBDs and 28% in NHBDs.
- Across the districts, availability of electricity was found to be poor. Availability of storage space was observed in 45% of AWCs in the HBDs and 27% in the NHBDs. Separate kitchen space was available in 40% of AWCs in HBDs and 25% in NHBDs.
- 76% and 75% of the AWCs had functional weighing scales in HBDs and NHBDs respectively. Availability of adult weighing scales in the HBDs was observed in 40% of AWCs, but in the NHBDs only 30% had them.
- As many as 85% AWCs in HBDs and 78% in NHBDs were found to have growth monitoring charts, but of these, 48% in HBDs and 42% in NHBDs were observed to have inadequate numbers.
- The majority of AWCs in both HBDs (89%) and NHBDs (93%) had pre-school kits, with 87% reporting usage on a daily basis in the HBDs compared with 70% in the NHBDs
- ORS was not available in 56% AWCs in HBDs, and in more than half of the AWCs in the HBDs IFA tablets/syrups were not available.
- Infrastructure at AWCs was found to be very poor in most of the districts. Some of the AWCs were running without a proper building, in some cases they operated in an open area or veranda. A majority of the AWCs were running from public places, like temples, schools and clubs. As noted, large numbers of AWCs lacked basic amenities like drinking water and toilet facilities; availability of storage space and separate kitchen space was also a major problem.

INDICATORS	HBD	NHBD
AWC functioning in own buildings	54	25.4
AWC functioning in veranda	6.3	3.5
AWC having drinking water facility	40.9	40.4
AWC having toilets	30.0	27.5
AWC with electricity connection	6.1	4.2
AWC with storage space	44.8	26.8
AWC having functional salter scale	75.5	75.4
AWC having pre-school kit	89.3	93

SHARING WITH DWCD AND ACTION PLANNING

The baseline survey findings were shared with the Department at the ICDS Task Force meeting chaired by Secretary cum Commissioner on 9th August 2011. Also included was concurrent monitoring (six months compiled report). It was decided to further disseminate this information at district level. The trend in common indicators in concurrent monitoring and baseline data was debated and the following points were discussed for planning and action. A detailed comparison of key indicators for each district has been carried out to identify district performance and gaps (Annexure 1).



KEY ACTION POINTS FOCUSING ON EQUITY

A detailed cross tabulation on key indicators by background characteristics (Annexure 2) has been carried out to identify equity issues and take appropriate actions.

- The following table reconfirmed the equity gaps prevalent during the NFHS, that caste, class and education play major role in under-nutritional status. It shows that children above three years and especially those from SC and ST communities and lower wealth quintiles are more susceptible to under-nutrition.

Categories	% of Under Weight Children (0-59 months)		% of Stunted Children (0-59 months)		% of Wasted Children (0-59 months)		% of Anaemic Children (6-59 months)		% of Children given 1 dose of Vitamin A (9-59 months)	
	NHBD	HBD	NHBD	HBD	NHBD	HBD	NHBD	HBD	NHBD	HBD
SC	36	38	35	39	26	24	62	63	74	84
ST	48	42	45	42	30	25	64	72	84	80
Lowest WI	47	42	47	43	31	22	64	72	79	78
Highest WI	22	28	28	32	22	21	49	53	84	90
Illiterate	40	42	39	43	29	23	67	71	70	77
HS & Above	21	34	25	31	24	22	46	51	92	94
Boys	34	41	37	42	27	24	52	66	80	85
Girls	30	38	33	40	22	22	57	66	79	83
Overall NBLs	32	39	36	41	25	23	55	66	80	84

Categories	% of Under Weight Children (0-59 months)	% of Stunted Children (0-59 months)	% of Wasted Children (0-59 months)	% of Anaemic Children (6-59 months)	% of Children given 1 dose of Vitamin A (9-59 months)
NFHS 3 (R)	42	47	21	67	
DLHS 3 (R)					71

2. Although overall the gap between the high burden and non-high burden districts did not show in the behaviour related indicators, service delivery is definitely seen to be better in NHBDs than HBD.

Categories	% of Children (6-23 months) Exclusively Breastfed for 6 Months		% of Children (0-23 months) Breastfed within 1 Hour of Birth		% of Children (6-23 months) initiated Complementary Feeding during 6-8 months		% of Children (12-23 months) received Complete Immunisation	
	NHBD	HBD	NHBD	HBD	NHBD	HBD	NHBD	HBD
SC	60	57	71	71	74	83	63	64
ST	75	63	62	70	86	84	78	64
Lowest WI	77	62	58	70	86	84	74	59
Highest WI	63	54	76	75	76	86	70	72
Illiterate	66	62	66	68	80	83	64	60
HS and Above	71	54	81	80	85	89	79	85
Boys	65	57	67	71	78	84	68	66
Girls	65	59	75	71	81	85	72	66
Overall NBLs	65	58	71	71	79	85	70	66
NFHS 3 (R)	51		55				52	
DLHS 3 (R)	42		64		60		61	

3. Unlike under-nutrition status, behaviour related to child feeding practices is better among ST, SC and also among illiterate women. This calls for exploring other determinants of under-nutrition.
4. The fact that districts such as Mayurbhanj and Deogarh are as bad as the HBDs in a number of indicators calls for immediate action.
5. Anaemia among all groups (children, adolescent and women) remains a major challenge, despite programmes like the Adolescent Anaemia Control Programme in KBK + Mayurbhanj. Prevalence of anaemia was found to be higher in disadvantaged groups like ST and SC and lower wealth quintiles in all categories of target respondents (children, pregnant women, adolescent girls).

Adolescent and Maternal Anaemia, Use of Iodised Salt and delivery										
Characteristics	% of Pregnant Women, who are Anaemic		% of Mothers (children age 0-36 months) received 3 ANC during last Pregnancy		% of Adolescent Girls (11-19 years) who are Anaemic		% of household using Iodized Salt		% of Mothers (children age 0-36 months) delivered at any health facility	
	NHB	HBD	NHBD	HBD	NHB	HBD	NHB	HBD	NHBD	HBD
SC	58	61	58	53	66	74	44	59	80	69
ST	68	59	39	45	80	77	30	49	59	47
Lowest WI	70	60	35	42	76	77	26	48	59	41
Highest WI	42	47	78	73	54	67	66	76	94	86
Illiterate	69	60	38	43	82	77	28	46	66	44
HS and above	38	40	90	76	49	70	77	78	96	93
NBLS Total	53	58	59	52	66	73	46	57	81	60
NFHS 3 (R)	69		58				32		35	
DLHS 3 (R)			52						40	
CCM			74						78	
NFHS 3 Status for all - Anaemia among Pregnant Women										

6. Use of iodised salt and institutional delivery is also low among ST despite the success of Janani Suraksha Yojana (JSY) in the State.

CONCLUSION

The baseline results show positive trends compared with NFHS III and DLHS III in a number of indicators and set higher benchmarks. As a first, the survey provides differential status based on caste, class and gender, with district level disaggregated data. It is also clear that further exploration is needed of the correlation with non-food determinants of nutrition status, such as hygiene and diseases like malaria, as only feeding practices show proportionately better status. The fact that certain indicators, like anaemia, are high among all categories (children, adolescents and pregnant women) irrespective of caste and wealth quintile certainly raises questions about practices and awareness. Under-nutrition is not a problem for only one department or ministry to deal with; a convergence of ideas and action is needed at all levels - centre, state, district, block and Gram Panchayat. Effective institutional mechanisms are needed to ensure this. The determinants and contributing factors are all important, including awareness, behaviour, supply of goods and convergence, in order to bring substantial change in the overall impact on nutritional status of children.