

**Report of the study  
To  
Understand the Health Status and Healthcare Systems in Selected  
Tribal Areas of India**



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**Swami Vivekananda Youth Movement  
in collaboration with  
Ministry of Health & Family Welfare & WHO Country Office for India**

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# Executive Summary

## 1. Introduction:

India is home to 84.33 million people classified as Scheduled Tribes (ST), corresponding to 8.2% of the total population. There are 461 groups of tribes who are spread over 26 states and Union Territories. Included in these categories are 74 tribes who have been identified as “Primitive Tribal Groups” (PTG, now called particularly vulnerable Group) characterized by pre agricultural level of technology, extremely low level of literacy and extreme poverty. In general, the Scheduled tribes (ST) live in isolated, scattered and difficult to reach terrain generally near hills and shrinking forests on which they depend for their livelihood.

Despite rapid strides in the field of diagnostics and therapeutics, adequate health care has not been reaching them even after the completion of the tenth five year plan. There is a consensus among various governmental programs to pay special attention to the marginalized Scheduled tribe population, though, the actual state of health and health care in ST areas has not been adequately documented. Though there is data available for rural and urban areas, **data for ST areas is very scanty**. This study was born out of this urgent and felt need in the health sector to study comprehensively and systematically the health situation of the scheduled tribes in the country so that recommendations to strengthen the programmes of NRHM and improve the situation could be formulated. It was conducted by **Swami Vivekananda Youth Movement (SVYM)** a development organization founded in the year 1984, engaged in building a new civil society in India through its grassroots action in Health, Education and Community development sectors. Over the past two decades it has been addressing the various developmental issues of the marginalized scheduled tribe and rural population of H.D.Kote Taluk, one of the most backward ST dominated taluks of Mysore District, Karnataka.

This study was conducted between 15<sup>th</sup> August 2008 and 15<sup>th</sup> September 2009 in selected ST dominated areas across 5 states (Jharkhand, Madhya Pradesh, Orissa, Maharashtra and Karnataka) which are home for 47% of the Schedule Tribes of the country. Among the states selected for this study, 3 belong to the high focus non-NE group (Jharkhand, Madhya Pradesh & Orissa), while two fall under the non high-focus large group (Maharashtra & Karnataka). It was supported by Government of India and World Health Organisation.

## 2. Goal:

To improve the health status of the 84.33 million Schedule tribe population in India and bring it on a par with the national average, by suggesting ways to improve the health care delivery through National Rural Health Mission (NRHM) programs.

## 3. Objectives:

1. To study the health status of representative samples of schedule tribe population living across the country.
2. To study the existing health care delivery system and mechanism in the chosen ST areas by evolving appropriate survey instruments.
3. To identify both the positive aspects and the lacunae in the health care.
4. To give recommendations to strengthen the health care mechanism of the NRHM strategy in ST areas.

The study has two main components, namely, a desk review of the relevant national level documents and a field review based on interviews with both the providers of health care and the beneficiaries to understand the data obtained from the desk review.

## 4. Key Findings:

The key areas that were studied to understand the Health Status and Health care delivery system and mechanism were 1. Under Five Child health, 2. Maternal health, 3. Adult health, 4. other significant factors that impact the health status and 5. The status of Health facilities.

### 4.1. General:

STs constituting 8.2% of the total population of the country contribute to 17.5 % of the rural poor. There is paucity of data pertaining to them and whatever is available is scanty. There seems to be no systematic mechanism to capture various disaggregate health related data for the ST population. All available studies and surveys

leave one in no doubt that all the health indicators, especially related to health status, accessibility, reach and health delivery, are very much below the national average and in most instances lower than the rural figures.

#### ***4.2. Under Five Child Health:***

1. The Crude Birth Rates in the ST are not available from the desk review materials.
2. The desk review shows that mortalities between 1 month to 5 years is 30 at the National level, 41 in the Rural areas and 64 in the ST areas per 1000 live births. The number of children dying in this age group in the ST areas is more than twice the national average. It is higher than the rural figures. The medical officers and other health providers interviewed during the field visit were found lacking in awareness of the extent of the mortality in different age groups of children in their area.
3. The health facilities like Sub Centre (SC), Primary Health Centre (PHC) and Communiy Health Centre (CHC)/First Referral Units (FRU) are inadequately equipped in terms of infrastructure, supplies, man power and skills to address illnesses which contribute to the morbidity and mortality in children. In addition to this, availability, accessibility and affordability issues come in the way of providing quality care to sick children.
4. The percentage of children who receive appropriate treatment for important childhood illnesses is low across the country as well as in the ST areas. In the ST, only 1 in 8 children gets appropriate treatment for Acute Respiratory Infections (13%) and Malaria (12%) and 1 in 3 for Diarrhea (29%). Only 60% of ST women are aware of the importance of Oral Re hydration Solutions in diarrhoea.
5. All the parameters for under nutrition are higher in the ST than the National and the rural figures. 57% of ST children are Underweight (Rural - 50% and National - 39%), 55% stunted (Rural - 50% and National 45%), 29% wasted (Rural - 25% and National 19%) and 78% anemic (Rural - 71% and National - 67%). The causes for the poor nutritional status are lack of access to appropriate quantity and quality of food due to poverty and reasons which go beyond the health sector which can only provide a necessary infrastructure and ensure its efficient functioning. In the nutritional interventions of the Anganwadi centres (AWC), the nutritional needs of the children

in the crucial age bracket (6 months to 2 years) are not being addressed although the Integrated Child Development Scheme (ICDS) covers the age group 0 to 3 years also. Only for 13% of the children are all the three recommendations of Infant and Young Child Feeding practice (recommended by WHO) followed.

6. Among the ST children in the selected states, 32% (1 in 3) received full primary immunization (National - 48%, Rural - 43%) and 12% (1 in 8) no immunization (National - 5%, Rural - 7%) as per the data of 2005/06 National Family Health Survey-3. The ST figures are lower than the national and rural figures. There has been no appreciable improvement in trend between 1998/99 and 2005/06. The inadequate coverage of immunization is related to difficulties in availability, procurement, storage, maintenance of cold chain of vaccines and accessibility of the target population. The ST figures of immunization coverage are lower than the rural figures. Only 15% of the ST children received Vitamin A in the previous 6 months and this is less than in the rural and national figures.

#### ***4.3. Maternal Health:***

1. Only 36% of the pregnant woman are registered for Ante Natal Care (ANC) in the I trimester, 41% receive mandatory 3 ANC and 28% do not have any ANC. 63% of the pregnant women receive IFA tablets but only 21% of them actually consume them for the mandatory 100 days. Among those registered for ANC, 40 to 64 % receive varying individual basic important components of the ANC. The percentage of women who receive all the basic components is not available from the reports. Only 32% of the pregnant women are told where to go if they experienced pregnancy related complications and 11 to 15 % of the pregnant women are given information on specific pregnancy complications. The important aspect of delivery preparedness and where to go if there are complications are not discussed with all the women.
2. Only 1 in 5 deliveries in ST is institutional delivery and 1 in 4 is assisted by health personnel in 2005 - 2006. In spite of the incentive schemes, there are difficulties in promotion of institutional deliveries. Although institutional deliveries in ST areas are reported to have increased considerably after the initiation of NRHM from the low level of 20%, the issue is still a matter of concern. The deliveries take place mainly in the Primary Health Centres or the First Referral Units and not in the Sub centres.
3. The infrastructural facilities, medical and paramedical human resources have not

improved much. We feel that just bringing the pregnant women to the institution for delivery does not address the basic need for appropriate and optimal care during delivery as the facilities are lacking in resources. It seems that there is not much difference between home and hospital deliveries in terms of quality of care.

4. On an average, 1 in 4 women gets Post Natal Care (PNC) within 48 hours of delivery. The health staffs are able to give PNC within 48 hours for only institutional deliveries and not for all home deliveries. In Orissa in the ST districts of Koraput and Mayurbanj, the DLHS 3 (2007/08) report states that the PNC within 48 hours of delivery is 100% and 95.7% respectively, though the percentage of institutional deliveries is only 11.6% and 40.3%. It is difficult to take the claim of 100% PNC. It is possible that the claim pertains to institutional deliveries only.
5. Figures for maternal mortality are not available in the reports of National Family Health Survey and District Level Household and Facility Survey(DLHS). The medical officers are of the opinion that maternal mortality has reduced and that they tend to occur in home deliveries. Sepsis, post partal hemorrhage and anemia continue to be the commonest delivery related complications. Yet, the Primary Health Centres and the First Referral Units are ill equipped to deal with such events. Only 40% of the FRU can manage the obstetric emergencies, 14% have blood storage facilities and 53% have facilities for Medical Termination of Pregnancy. Apart from mortality, the magnitude of the morbidity (so called near miss events) related to child birth is not known. The importance of maternal morbidity goes beyond the mother and affects the newborn as well. Status of unsafe abortions in the ST areas has not been recorded.
6. The other indicators like Total Fertility Rate (TFR), Birth order of >4, and Teenage pregnancy in ST are higher than the National average. TFR : ST - 3.14, National - 2.5, Rural - 2.77; Birth order >4: ST - 33.4, National - 22.2, Rural - 24.2: Teenage pregnancy : ST - 22.5, National - 19.9, Rural - 20.7. In Karnataka, the TFR in ST has increased from 2.38 to 2.53 and the birth order of >4 from 18 to 24, while the decadal growth rate for the ST in Dakshin Kannada has shown a negative growth of 2.9% This is a cause for concern and it needs to be studied further. Every 4<sup>th</sup> pregnancy in the ST areas is a teenage pregnancy, yet, neither the medical officer nor the Auxillary Nurse Midwife (ANM) were aware of the magnitude of teenage pregnancies in ST.
7. The total unmet need for Ffamily Planning in the ST is 25% for the selected states. It

is 13% at the national level and 14% for the rural population. Medical Termination of Pregnancy services were available in only 53% of the Community Health Centres visited.

#### **4.4. Adult Health:**

1. 41% of ST men (National - 34%; Rural - 38%) and 47% of ST women (National - 36%; Rural - 41%) are undernourished with the Body Mass Index (BMI) of <18.5. 40% of ST men (National - 25%; Rural - 28%) and 69% of ST women (National - 55%; Rural 57%) are anemic. The nutrition of adolescent girls, pregnant and lactating women bears a direct relationship with the nutrition of the child. The Anganwadi centre does not adequately address this section.
2. Disaggregate figures for the prevalence of tuberculosis for the state are not available. The awareness about tuberculosis and Directly Observed Treatment Schort course (DOTS) in ST is 70% and 60% respectively. Though cumulative figures for the ST districts across the nation show that the targets for Revised National Tuberculosis Control Programme (RNTCP) have been reached as per the annual report for 2008, during the field visit, it was learnt the health functionaries faced challenges in case detection and case holding. With these problems, it is difficult to understand how the targets for RNTCP have been reached in the ST districts. Disaggregate figures for the ST in the areas of Leprosy, Kala Azar and Malaria are not available.
3. Prevalence of Human Immune deficiency Virus (HIV) infection in the ST is not available. Awareness indicators for the ST show that 8% of women and 20% of men have comprehensive knowledge about HIV. Specific measures to address this problem have not been implemented at the state levels except in Maharashtra and Karnataka. Though HIV screening in pregnant women is recommended in the country there are no facilities for screening in three of the states visited. Integrated Counseling and Treatment Centre (ICTC) facilities are not easily available in the PHCs or FRUs and people need to go the District hospitals for these services.
4. There is low awareness amongst the PHC Medical Officers about the prevalence of genetic diseases in ST. At the PHC level the resources are inadequate to address the non communicable diseases and hence the patients have to go to the FRU or the district hospital for diagnosis and treatment.

#### **4.5. Other factors that contribute to the Health status:**

1. Only for 40% of the rural and lowest two wealth index categories, to which most of the ST population belongs, Government facilities are the source of health care. The remaining 60% seek private providers. The main reasons given for not seeking care in the government health facilities are poor quality of care (51%), lack of a nearby facility (45%), and long waiting times (32%).
2. 26% of women and 71% of Men use tobacco in some form or the other and 14% of women and 50% of men use alcohol in ST. 46% of ST women experience some form of spousal violence (Physical, emotional or sexual). These figures are higher than the national and rural figures. During the field visit, we found that the PHC Medical Officers and the health workers are lacking in awareness of the magnitude of these problems. No specific focus on these issues is being given in general.
3. Only 2.6% of the ST families have any type of health related insurance.

#### **4.6. Health facilities:**

##### **4.6.1. Primary Health Centres (PHC):**

1. Each PHC caters to a population of 17,000 to 65,000, the average being 40,000 spread over 59 villages and the average distance of the farthest village from the PHC is 24 km. The distance between the PHC and the nearest referral centre is 28 km. Nearly 18 percent of the villages do not have proper roads and 11 percent are not accessible during certain periods of the year. In terms of population coverage and accessibility, the PHCs in these ST areas are overburdened and not easily accessible by all the villages under their care.
2. Only in 43% of the PHCs were the medical officers staying on the campus. There is no back up support when the medical officers are on leave in PHCs with single Medical Officer. On an average 20 % of the posts of paramedical staff excluding Accredited Social Health Activist (ASHA) are vacant.
3. Only 72% of the PHCs were in good condition. Some of the PHCs are still in the process of transition or up gradation from PHC to CHC and hence there was

confusion even among the medical officers as to the status of their own institution and their own job description. The up gradation process was not complete even 4 years after the implementation of NRHM.

4. Piped water supply was available in 45% and functional toilets in 58% of the PHCs. 51% of the PHCs had regular electricity and 27% had generator back up. 44% of the PHCs had connectivity through land line phones. Some of the interior ST areas are not reachable even by mobile phone facilities. 76% of the PHCs had Ice Lined Refrigerator (ILR) and Deep freezer for vaccine storage yet only in 36% of them were they functional. 57% of the PHCs had more than 75% of the essential medicines including Anti snake venom. Minor Operation theatre is available in 28% of the PHCs and functional ambulance facilities in 34%.
5. Though clinical laboratory facilities are available in 69% of the PHCs, they had limitations in terms of range of basic investigations (one or more of the following tests are available - Haemoglobin estimation, Urine albumin, sugar estimation, Urine pregnancy test, smear for AFB and Malarial parasite) and availability of full time laboratory technician.
6. 75% of the PHCs have labour rooms where labour is being conducted. However, only 17% have adequate facilities for conducting normal labour and 19% for newborn care.
7. The general cleanliness of the PHC was good only in 5% of the PHCs. The waste disposal mechanisms in the PHCs are either burning or burial. None of the PHCs visited had the recommended waste segregation and disposal mechanisms in place.
8. Only 58% of the MOs had any kind of skill development training in the previous two years.

**In general, during the field visit we found that the PHCs are not fully equipped to address the health needs in the tribal areas.**

#### **4.6.2. Subcentres (SC):**

1. On an average each PHC has 11 subcenters ranging from 5 to 18 per PHC each having a population of about 4000 spread over about 7 scattered hamlets. As per NRHM, the Sub-Centres are currently provided on the population norm of 1 per 5000

population in general areas and 1 per 3000 population in tribal areas.

2. 28% of the subcentres have no vehicular access, 18% have no proper access road and 11% have no all weather access. 6% had no ANM and 65% have no male health worker. 49% of the ANMs claimed that they live in the subcentre village. Though 11% of the subcentres had designated rooms for conducting normal labor, they were not conducive for it. None of the subcentres had facilities for newborn resuscitation. Basic drugs were available in only 60% of them.

#### **4.6.3. Anganwadi centres (AWC):**

1. Though the percentage of utilization of the AWCs in ST is higher than the rural figures, in absolute terms only 50% of children are registered and 38% among them are weighed regularly for monitoring of their nutritional status. 48% of the mothers whose children are weighed receive some form of nutrition related counseling. Thus the benefit of growth monitoring goes only to a very small fraction of ST children.
2. The overall hygiene of the centres and the children was very poor in the centres visited. In some states there were no buildings for the centre and the worker managed by cooking in her home. None of the AWCs had a toilet. The quality of the food grains that were stocked was poor. Many of the centres had no weighing scale. In areas prone for terrorist / Maoist attacks, (Jharkhand) we were told that 1/3<sup>rd</sup> of the budget of the centre goes to the Maoist supervisor – Mapahadia people.
3. The challenges facing Anganwadi workers include too much of documentation work, people not having faith in anganwadi services, poor infrastructure at anganwadi, irregular supply of provisions to the centres, difficulty in transporting the provision to the centres as they are not paid separately for this. The present function of the Anganwadi worker (AWW) as a part time honorary worker is a hindrance to their full involvement with the program. Their salary/honorarium is poor and its disbursements are irregular. They are also given periodically certain non health related jobs. These difficulties decrease their morale and enthusiasm in the work.
4. The Anganwadi is more a feeding center and the component of preschool education of the children is often lacking.

5. The ST community (in Jharkhand, Madhya Pradesh and Maharashtra) feels that food must be provided twice a day.

#### **4.6.4. Community Health Centres (CHC) Or First Referral Unit (FRU):**

1. Each CHC serves a population of 1,34,250, spread over 100 villages and is a referral centre for 5 PHCs. The CHCs are currently provided on the population norm of 1 per 1,20,000 population in general areas and 1 per 80,000 population in tribal / desert areas.
2. Only 72% of the CHC buildings were maintained well and functional toilets were available only in 58% of them. Some of the crucial facilities which contribute to adequate health care during emergencies were found to be wanting. Obstetricians, Surgeons and Anaesthetists were available only in 44%, 30% and 20% of them respectively. 44% of the CHCs had facilities for Medical Termination of Pregnancy and 14% had blood storage facilities. Only around 40% of the CHCs were equipped to address the Obstetric and infant related emergencies and 22% Surgical emergencies due both to poor infrastructure and non availability of skilled human resource. Functional
3. X-ray facilities were available in 66% and functional Ambulance facilities in 85% of the CHCs.

## 5. Recommendations:

### *5.1. Disaggregate ST Data collection:*

Systems and mechanisms to collect disaggregate data pertaining to the health of the ST population at the village, block, district and the State levels on an ongoing basis need to be established to monitor the health related indicators prospectively.

### *5.2. Under Five Child Health:*

1. The mechanism for recording of birth and death of ST children at the PHC level needs to be strengthened by efficient utilization of the services of ASHA, AWW and ANM. The PHC medical officer needs to have a pro active mechanism to track and record these life events as and when they happen.
2. The PHCs and the CHCs must be adequately equipped in terms of infrastructure, human resource and equipments to address the illnesses in children. Accessibility, availability aspects of health care need to be strengthened.
3. The Medical Officers and the paramedical staff need to be sensitized about the extent of mortalities in children. They must undergo relevant initial skill development trainings before appointment to the facilities and periodic in service training thereafter.
4. There is a clear need for strengthening and ongoing monitoring of focused interventions in the areas of Immunization, Vitamin A supplementation and Anganwadi services in the ST areas. The possibility of introducing additional incentives to ANM, ASHA as well as the parents of children may be examined for strengthening these interventions.
5. Focus should be given in the ST areas on regular Health education activities specifically targeting the issues of nutrition, immunization, utilization of nutritional services and childhood illnesses.

### *5.3. Maternal Health:*

1. Pro active promotion of early ANC registration, provision of all the components of

ANC care and counseling regarding complications and delivery preparedness need to be ensured through ASHA and ANMs. This should be actively monitored by the medical officer on a monthly basis. As there is poor compliance to oral iron preparations, use of parenteral safe iron sucrose formulations need to be considered.

2. Effective communication mechanism must be established between the community, sub center ANM/ASHA, the PHC medical officer and the FRU especially with regard to delivery care. Proper delivery preparedness must be discussed with each and every pregnant mother. For people living in very remote areas, arrangements for living near the PHC around the time of delivery (transit accommodation) need to be established, especially in ST areas. Maharashtra is planning this model. (Maher scheme of giving transit accommodation to the pregnant woman in/near the PHC).
3. The Sub center, PHC and FRU need to be well equipped and adequately staffed to provide appropriate levels of obstetric care. Development of delivery facilities in the Sub center needs to be examined in the ST areas.
4. Information related to ANC, Institutional deliveries, temporary and permanent methods of family planning need to be regularly included in all health education activities in the community. All the misconceptions regarding the various methods of FP need to be addressed. Gaps in provision of care in the area of family planning need to be filled. Medical Termination of Pregnancy (MTP) services must be made available in all the FRUs.
5. Giving incentives even to the home deliveries needs to be reconsidered as it has a negative impact in promoting institutional deliveries

#### **5.4. Adult Health:**

1. Nutrition programs of AWC should proactively focus on the nutritional inputs of all intended beneficiaries, i.e., Pregnant women, Lactating women and the adolescent girls.
2. Disaggregate ST data must be collected at the PHC, Block and District levels for the communicable and non communicable diseases. As this involves additional human resource, adequate provisions must be made to address this important ongoing activity.

3. There is need for more District Microscopy Centre (DMC) in the ST areas. In view of the peculiarity of the scattered population, ST areas should be provided DMCs as per their actual requirement and not merely on the basis of the prescribed population norms. To strengthen the supervisory mechanism under DOTS in ST areas because of their scattered population, separate DOTS supervisors must be sanctioned for the ST areas. The PHC medical officer in the ST areas must be more actively involved in DOTS programme.
4. ICTC facilities need to be established in the FRU and must be available at least once a week at the PHCs.
5. Awareness programs need to be strengthened in the ST areas for HIV and Tuberculosis.
6. Medical officers need to be sensitized about the genetic disorders in the ST.
7. Facilities need to be provided at the PHCs for primary level treatment of non communicable diseases.

**5.5. Other factors that contribute to the Health status:**

1. Primary mental health care programme needs to be integrated at the PHC level.
2. Issues like Alcohol use, Tobacco or other substance use and spousal violence need to be addressed by multipronged approach of health education, counseling, rehabilitation etc. The health staff must be sensitized to the prevalence of these social problems.
3. Community based health insurance plans need to be popularized in the ST areas, linking them with the micro credit schemes.

**5.6. Health facilities:**

1. As the population density in the country is not uniform especially in the ST areas, infrastructural provision and improvement as per norms of NRHM should be effected on priority basis in ST areas by setting up of more Anganwadis, Subcentres, PHCs and CHCs in just relation to the actual needs and accessibility of these areas. It would make eminent sense to link the number not to the population but to the case

load and distance of the village / habitation.

2. The Infrastructure, Human resource availability, laboratory facilities, equipments, supplies, transport facilities of the PHCs and CHCs need improvement as per what is guaranteed by NRHM. Recruitment of adequate medical and nursing man power to the ST areas by offering more attractive benefits will need to be considered. Crucial facilities which contribute to adequate health care during emergencies, labour, infant and childhood illnesses need to be made available in PHCs and CHCs round the clock. Priority should be given to posting of an additional ANM to the Subcentres and additional medical officers to the PHCs in the ST areas. Providing local staff from among the ST for working in ST areas needs to be seriously considered. The health staffs need to have periodic skill up gradation training.
3. Communication facilities between the community and the ANM and ambulance related facilities need to be improved.
4. All ST habitation falling within the revised population norm of 300 must be provided one AWC. The norm should be further relaxed to ensure that every ST habitation, irrespective of the population, has this basic facility related to nutrition security. Food and other materials for use in the AWC need to be supplied at its doorstep regularly. Efforts should be made to provide a ST woman as an AWW in ST areas. Her honorary status needs to be reconsidered and her remuneration needs to be paid regularly without undue delay. The nutritional needs of children in the crucial age bracket of 0 to 2 years need to be specifically addressed.
5. The quality of care can be improved by conducting regular mandatory specialist camps at the PHC level.
6. Strengthening of the monitoring mechanism in ST areas should receive special attention of the health authorities. Separate periodic monitoring of the activities of the Anganwadis, Subcentres, PHCs and CHCs need to be ensured. Desirability of involving civil society through eminent activist or a credible Non Governmental Organization may also be considered.

#### ***5.7. Other recommendations to strengthen certain aspects of NRHM:***

1. Human resource: Recruitment of adequate medical and nursing man power to the ST

areas by offering more attractive benefits will need to be considered. The salary for contract workers must be on par with the regular service people. It is felt that many contract workers are not fully involved with the work. As many of the support staff are recruited on contract basis, they are not given residential quarters and this needs to be addressed. As the clinical responsibilities of the medical officer have increased with increasing hospital deliveries and case loads, there is a felt need to have more human resource for clerical and supervision work related to building construction.

2. Fund flow: The designated funds for NRHM for various levels need to be released in time to avoid last minute hurry to spend. The cheques should be accompanied by clear instructions as to the purpose for which they are ear marked (Annual Maintenance Grant, Untied Fund, Rogi Kalyana Samiti) to avoid confusion and hesitation in using them. There needs to be more decentralization of fund management and the medical officer should be given independent money drawing power during emergencies. Transparency of fund utilization must be ensured by adequate external auditing.
3. The Tribal Welfare Directorate needs to be more actively involved in the policy decisions, project planning, implementation and monitoring of the activities of NRHM.
4. AYUSH: The process of mainstreaming of AYUSH needs to go beyond posting of an AYUSH medical officer as an additional medical officer in the PHC. Documentation of the revitalization of the local health traditions in the ST areas must be done proactively.

## **6. Conclusion:**

This study was born out of an urgent and felt need in the health sector to study comprehensively and systematically the health situation of the scheduled tribes in the country so that recommendations to strengthen the programmes of NRHM and improve the situation could be formulated. It was conducted between 15<sup>th</sup> August 2008 and 15<sup>th</sup> September 2009 and it included two main components, namely, a desk review of relevant national level documents pertaining to the health status of the ST and a field review in selected ST dominated areas across 5 states (Jharkhand, Madhya Pradesh, Orissa, Maharashtra and Karnataka) which are home for 47% of the Schedule Tribes of the country. Among the states selected for this study, 3 belong to the high focus non-NE group (Jharkhand, Madhya Pradesh & Orissa), while two fall under the non high-focus large group (Maharashtra & Karnataka). The key areas that were studied to understand the Health Status and Health care delivery system and mechanism were 1. Under Five Child health, 2. Maternal health, 3. Adult health, 4. Other significant factors that impact the health status and 5. The status of Health facilities. The study yielded valuable information and insight to the health status in the selected ST areas to identify the major concerns and formulate relevant recommendations for NRHM.

# Detailed Report of the Tribal Health Study

## 1. Introduction:

The Tribes of India are the indigenous people inhabiting different parts of the country. The main characteristics of all tribes are their tribal (indigenous) origin, primitive way of life, habitation in remote and less easily accessible areas and general backwardness in conventional developmental parameters. In today's tribes, the ideal type of tribe is rarely to be found and what we see is tribes in transition. The word 'Scheduled Tribes' arose only after the Constitution came into force in 1950. The details and provisions are contained in the article 342 of the constitution<sup>1</sup>.

According to the 2001 census, India is home to 84.33 million people classified as Scheduled Tribes (ST), corresponding to 8.2% of the total population. It lists 461 groups of tribes who are spread over 26 states and Union Territories and their population can be divided into categories based on geographical distribution and historical, ethnic and socio cultural dimensions. Included in these categories are 74 tribes who have been identified as "Primitive Tribal Groups" (PTG, now called Particularly vulnerable Group) characterized by pre agricultural level of technology, extremely low level of literacy and extreme poverty. In general, the Scheduled tribes (ST) live in isolated, scattered and difficult to reach terrain generally near hills and shrinking forests on which they depend for their livelihood.

Despite rapid strides in the field of diagnostics and therapeutics, adequate health care has not been reaching them even after the completion of the tenth five year plan. **Health policies have few specific strategies for improving access to marginalized groups.** "In terms of both income poverty and other indicators of human development (such as education and health) the scheduled tribes are at the bottom. The increasing concentration of the scheduled tribes among those who suffer from multiple deprivations is a matter of concern. The proportion of scheduled tribe population among the rural population living in poverty has been increasing fast. It increased from 14.8% in 1993-94 to 17.5% in 1999-00 – double that of their share in the total population of India"<sup>2</sup>. The National Rural Health Mission (NRHM) document has identified striking disparities and inequities in healthcare to rural and ST population throughout the country due to weak public health infrastructure.

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<sup>1</sup> Adopted from "Encyclopaedic Profile of Indian Tribes" First Edition, Published by Discovery Publishing House, New Delhi

<sup>2</sup> The Steering committee report on Rapid Poverty Reduction and Local Area Development for the Eleventh Five Year Plan, Page 17, (2007-2012), Government of India.

It seeks to provide effective healthcare throughout the country with special focus on areas which have weak public health indicators and/or weak infrastructure. The Revised National Tuberculosis Control Program also has called for the need to take up action research to strengthen its activities in ST areas. **Thus there is a consensus among various governmental programs to pay special attention to the marginalized Scheduled tribe population.**

While such commitment from the Government is very positive and re assuring, the actual state of health and health care in ST areas have not been adequately documented. Though there is data available for rural and urban areas, **data for ST areas is very scanty.** The available data on health status indicators of ST are very much below the national average. Moreover, as the health statistics of the ST tend to be added to the rural statistics, it masks the poorer situation of the tribal population.

Under these circumstances there is an urgent and felt need in the health sector to study comprehensively and systematically the health situation of the scheduled tribes in the country. Measures that need to be taken to improve the situation need to be ascertained. There is hardly any study done which looks at both the provider and beneficiary points of view, simultaneously and unbiasedly. This study aims to address this important aspect. Moreover, its recommendations will be helpful in formulating guidelines for strengthening the implementation of the National Rural Health Mission programs (NRHM) in scheduled tribe dominated areas to achieve the Millennium Developmental Goals.

This study was conducted by **Swami Vivekananda Youth Movement (SVYM)** a development organization founded in the year 1984, engaged in building a new civil society in India through its grassroots level action in Health, Education and Community development sectors. Over the past two decades it has been addressing the various developmental issues of the marginalized scheduled tribe and rural population of H.D.Kote Taluk, one of the most backward ST dominated taluks of Mysore District, Karnataka. In the field of Health it has both community level interventions and hospital based interventions in the rural and ST areas. The community interventions are through village health workers, working in tandem with the field level health functionaries of the government sector and the hospital care is through a primary care hospital in the tribal area at Kenchanahalli and a secondary care multi specialty rural hospital at Saragur. The community health interventions have preventive, promotive, curative and rehabilitative components with specific focus on Primary care, Reproductive and Child Health, and eye care among other areas. These interventions have greatly improved the health status of the scheduled tribal

population in general<sup>3</sup>.

This study was conducted between 15<sup>th</sup> August 2008 and 15<sup>th</sup> September 2009 in selected ST dominated areas across 5 states (Jharkhand, Madhya Pradesh, Orissa, Maharashtra and Karnataka) which are home for 47% of the Schedule Tribes of the country.<sup>4</sup> Among the states selected for this study, 3 belong to the high focus non-North East group (Jharkhand, Madhya Pradesh & Orissa), while two fall under the non high-focus large group (Maharashtra & Karnataka).<sup>5</sup> It was supported by the Government of India and the World Health Organization.

## **2. Goal and objectives of the Study:**

### **2.1. Goal:**

To improve the health status of the 84.33 million Schedule tribe population in India and bring it on a par with the national average, by suggesting ways to improve the health care delivery through NRHM programs.

### **2.2. Objectives:**

5. To study the health status of representative samples of schedule tribe population living across the country.
6. To study the existing health care delivery system and mechanism in the chosen ST areas by evolving appropriate survey instruments.
7. To identify both the positive aspects and the lacunae in the health care.
8. To give recommendations to strengthen the health care mechanism of the NRHM strategy in ST areas.

## **3. Methodology:**

The study has two main components:

1. Appraisal of health status and services in Scheduled tribes by a desk review of relevant

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[www.svym.org.in](http://www.svym.org.in)

<http://censusindia.gov.in>

At the implementation level, NRHM has categorized the Indian States & UTs into 4 distinct groups – high focus North-East, high focus non-NE, non high-focus large states and non high-focus small states.

national level documents. This data will give insights into the existing information and guide the field based study.

2. Qualitative field based interviews with both the providers of health care and the beneficiaries to understand the data regarding the health situation obtained from the desk review.

## **4. Materials and Methods:**

### *4.1. Selection of issues and indicators to be studied:*

While selecting and short listing the issues and the indicators, three key considerations were taken, namely, the objectives of the study, Goals of NRHM and the Health related Millennium Development Goals.

An in-depth study of the available data showed that the main issues can be grouped under three categories:

1. *General Indicators:* – Percentage of ST population, Socio economic condition, and Total fertility rate, Crude Birth Rate, School enrollment, Literacy, Sanitation and provision of safe water.
2. *Health Status and Provision of Health Services:*
  1. Child Health– Indicators for mortality, nutritional status, Basic child health service provision;
  2. Maternal Health services;
  3. Adult Health status and health awareness;
  4. Disease specific morbidities and mortalities;
  5. Other socio cultural issues that impact on health.
3. *Health Facility indicators:* – Anganwadi Centre, Sub Centre, Primary Health centre and Community Health Centre.

These are the core issues that actually reflect the health status of the community. While studying the available data two important issues were noticed namely, paucity and disparity of data for ST, which could be understood by the field visit.

The exhaustive set of indicators that were evolved based on the issues identified was fine tuned by the team of doctors at SVYM after a series of consultations and meetings.

#### *4.2. Selection of States, districts, blocks and sample size:*

The Technical Resource Group (TRG)<sup>6</sup>, consisting of the researchers and subject experts met to deliberate on the project and outline the course of the study. It also discussed the inclusion and exclusion criteria to be followed. One of the important decisions taken was to use the term 'Scheduled Tribe' instead of 'Tribals'.

Five states namely, Jharkhand, Madhya Pradesh, Orissa, Maharashtra and Karnataka were selected as they are home for 47% of the Schedule Tribes of the country.<sup>7</sup> Among the states selected for this study, 3 belong to the high focus non-North East group (Jharkhand, Madhya Pradesh & Orissa), while two fall under the non high-focus large group (Maharashtra & Karnataka)

Using data from the 2001 census pertaining to the States selected for the study, the top 5 districts in terms of percentage of Scheduled Tribes in the total population were short listed in each State. This list was then narrowed down to 2 districts each, based on the following criteria:

- Presence of Forest Based Tribes in the district.
- Location: Districts needed to be non-contiguous and preferably to have a wide geographical separation.
- Absence of any significant health intervention by any Non-Governmental agency.

This was followed by the meeting of the Project Oversight Team (POT)<sup>8</sup>, which helped decide on the sample size. It was finally decided to select three blocks in each district (based on the percentage of ST population) and two PHCs per block. At the PHC level, one sub-center and one anganwadi serving that PHC were to be visited. In addition, one CHC, which was the FRU for the PHCs chosen, was to be visited.

To elicit the views of the beneficiaries, one focus group discussion (FGD) was to be conducted at one of the villages served by the PHC.

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<sup>6</sup> Refer to Annexure for details

<sup>7</sup> <http://censusindia.gov.in>

<sup>8</sup> Refer to Annexure for details

### 4.3. Tools and Techniques:

After the Technical Resource Group and Project Oversight Team meetings and internal discussions regarding the development of instruments the important issues and indicators to study in depth were short listed.

A thorough review of the secondary literature was done to identify the exact data that needed to be collected from the field visits. A detailed data gathering matrix was prepared after many internal discussions with the SVYM team to formulate appropriate questions pertaining to the issues.

The sources at different levels (Provider and Beneficiary) from which the answers to the questions formulated could be obtained during the field visit were then identified.

The Anganwadi, Sub Center, PHC, CHC and DHO level questionnaires would provide answers from the provider's perspective while the FGD will be would provide the answers from the beneficiaries' perspective. The intended composition of the FGD was Panchayath members, elders in the village, members of the School Development & Monitoring Committee (SDMC) of that village and members of Self Help Groups, with a quorum of 15 and an equal mix of men and women.

The State level questionnaires were intended to give the higher decision making and policy perspectives of the health situation.

**Table 1. Source of data**

Information	Source	Tools
Health status and service provision indicators	Web based literature	Desk review
Answers for the gaps in Health care	Field review	Questionnaires for different levels - AWC, SC, PHC, CHC and DHO
Policy level information	Field review	Interviews with the State level functionaries
Beneficiaries' Perspectives	Field review	FGD

The individual grass root level questionnaires were field tested in H.D.Kote and Hunsur blocks of Karnataka for fine tuning and feasibility.

#### 4.4. Literature review:

The following resources were accessed for the desk review:

1. Web search for data on the health of the schedule tribes was made and the data from the following web sites were selected for review:

- **NFHS 1 (1992-93), NFHS 2 (1998-99) and NFHS 3 (2005-06)** (<http://www.nfhsindia.org>) : In NFHS reports and fact sheets there were significant amount of data pertaining to the health status indicators for various social groups of the country and individual states.
- **DLHS 2 (2002-2004) and DLHS 3 (2007-2008)** (<http://www.rchiips.org>): DLHS reports and Fact sheets of the selected states, give information on the health status indicators and the health infrastructure indicators.

Reports of NFHS and DLHS were taken as the main source for desk review for the following reasons:

- Their data were collected from the family and community by statistically valid field level surveys.
- They provide comparable data to understand the trend from 1992.
- **Census of India** (<http://censusindia.gov.in>): This gives details the ST population and their percentage across all the States, Districts and Blocks.
- **International Institute of Population Studies** (<http://www.iipsindia.org>): A document called 'World Health Survey 2003 - India; Health System Performance Assessment' was accessed. It contained data on health systems performance, National Health Policy of India 2002, socio-demographic profile of India, health infrastructure and health status profile for India.
- **Health departments of respective State Governments:** The health related data posted in the websites are from the NFHS and DLHS reports.
  - a. Karnataka: <http://karhfw.gov.in>
  - b. Madhya Pradesh: <http://www.mp.gov.in/health>
  - c. Orissa: [http://www.orissa.gov.in/health\\_portal/index.html](http://www.orissa.gov.in/health_portal/index.html)
  - d. Jharkhand:  
[http://www.jharkhandonline.gov.in/New\\_Depts/health/health\\_fr.html](http://www.jharkhandonline.gov.in/New_Depts/health/health_fr.html)
  - e. Maharashtra: <http://www.maha-arogya.gov.in>
- **Rural Health Statistics (RHS) Bulletin 2008** ([http://www.mohfw.nic.in/Bulletin\\_on\\_RHS\\_March.htm](http://www.mohfw.nic.in/Bulletin_on_RHS_March.htm)): This gives State-wise demographic indicators, Rural Health Infrastructure, Health man power in rural areas,

Status of facilities available, Training aspects of medical and paramedical personnel and some parameters of achievements.

- **Central Bureau of Health Intelligence** (<http://www.cbhidghs.nic.in>): The National Health Profile 2005 posted here provides information on the Vital statistics, Socio economic indicators, Health status indicators, Health finance indicators, Human resource in health sector indicators and Health infrastructure indicators.
- **Planning Commission of India, Eleventh 5-year plan (2007-12) documents** (<http://planningcommission.gov.in/plans/planrel/11thf.htm>): This provides the reports on the Rapid Poverty Reduction and Local area development, Empowerment of Women, Development of Children and Development of Educational inputs for SC/ST and other disadvantaged groups.
- **UNICEF India** ([www.unicef.org/india](http://www.unicef.org/india)): This provides some basic health statistics at a glance.
- **Ministry of Health & Family Welfare / NRHM**: (<http://mohfw.nic.in/NRHM.htm>): They provide a lot of information on the health status and governmental initiatives in health care.
- **Ministry of Tribal Affairs** (<http://tribal.nic.in/index.asp>): This website provides information on the developmental and educational initiatives undertaken by the ministry.
- **Ministry of Women & Child Development - ICDS** (<http://wcd.nic.in/icds.htm>): This gives an overview of the scheme, its objectives and the services provided across the country.
- **Regional Medical Research Center for Tribals (ICMR), Jabalpur** (<http://www.rmrct.org>): The biannual Tribal Health Bulletins published by this institute gives valuable information about health related issues concerning the ST, especially RCH issues. 'Tribal Health in retrospect' – experiences from research studies conducted at the institute is also a valuable data source.
- Progress reports from National Health Programs
  - a. Vector borne diseases: <http://nvbdcp.gov.in>
  - b. Tuberculosis: <http://www.tbcindia.org/RNTCP.asp>
  - c. Leprosy: <http://nlep.nic.in>
- Text book of Preventive & Social Medicine, 19<sup>th</sup> Edition, by K.Park
- Articles from Wikipedia
- Web articles and articles from journals
- Human Development Reports of Madhya Pradesh, Maharashtra, Orissa and Karnataka, released by UNDP
- Statistics from the website <http://www.indiastat.com>

2. Resources from the library of Anthropological Survey of India, Mysore, Karnataka:

- Multi volume Encyclopedic Profile of Indian Tribes gives the comprehensive information about the various Schedule Tribes and Primitive Tribes and their distribution across the country.
- Study reports on the ST by the Anthropological Survey of India.

#### ***4.5. Field visit:***

The field visits, though originally planned for April & May 09 had to be postponed because of the General Elections in May. Separate study teams of 3-4 members were constituted for each State, in which at least one member was a medical doctor. All the teams were oriented about the study objectives and instruments. In each state, a grassroots organization was identified through known sources, to seek help with the local logistics and also for interaction with the community in the local language.

Official communication was sent to the respective State Health Directorates, informing them of the team's visit and requesting support for field work. After hearing from the Directorate, the Chief Medical Officers (CMOs) of the districts chosen for the study were contacted and mutually convenient dates were worked out. 8-10 days were allocated and budgeted for visit to each state.

We met the CMO and took his help in choosing the PHCs in the blocks that we had short-listed. We made sure that the PHCs were located in areas inhabited by Scheduled Tribes. In some instances, we had to opt for a different Block forced by local circumstances like availability of personnel, functional status & availability of health facilities and also accessibility issues. The PHC & CHC medical officers were informed about our visits. The local researchers (from grassroots organizations) were also given a thorough orientation about the field work.

On reaching the PHC, the team split up for interactions with different personnel. The team-lead interacted with the medical officer and also did the survey of the facility. One person interviewed the ANM (Junior Health Assistant - Female) and the Anganwadi worker, in addition to assessing the sub-center and anganwadi. Another member conducted the group discussion with the community, with the help of the local researcher. Thereafter the whole team discussed the material gathered. This whole PHC-level interaction lasted about 4 hrs, following which the team moved to the next PHC, where the whole process was repeated.

The FRU/CHC was visited either before or after the PHC-level interaction, depending upon the local factors. On an average, one Block was completed per day. Discussion with the CMO, either before or after the field work formed an important component of the field work.

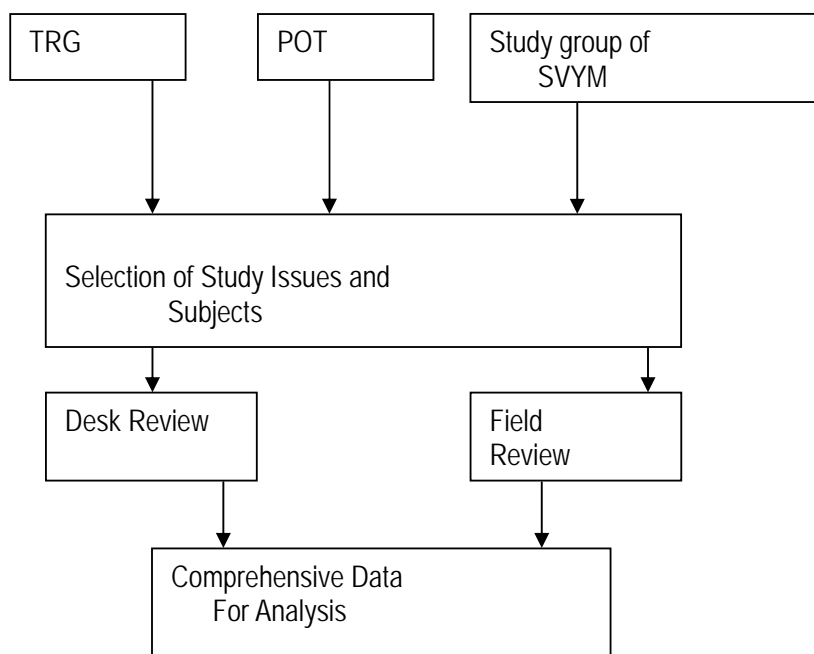
The interviews of the state-level officials were mostly done after the completion of the field work. Though prior appointments had been taken, there were instances where the meeting could not take place due to unforeseen circumstances. In such cases, attempts were made to do a telephonic interview with the officials concerned.

Before beginning the data gathering, the purpose of the study was explained to the respondent and his/her verbal consent was obtained.

#### ***4.6. Compilation and Analysis of the Data:***

This was done using simple statistical measures available with the Micro soft Excel programme.

**Figure 1. A schematic representation of the Methods**



## 5. Findings and Discussion:

The key areas that were studied to understand the Health Status and Health care delivery system and mechanism were 1. Under Five Child health, 2. Maternal health, 3. Adult health, 4. Other significant factors that impact the health status and 5. The status of Health facilities.

### 5.1. Under Five Child Health:

The population of children under five years in India is estimated to be 11,85,68,000<sup>9</sup>, forming 11.13% of the total population of the country. India is faced with an unparalleled child survival and health challenge. The country contributes 2.4 million of the global burden of 10.8 million under-five child deaths every year, which is the highest for any nation in the world.<sup>10</sup> Infant and childhood mortality are sensitive indicators of inequity and poverty.<sup>11</sup> The issues that are researched are Mortality and its trends, Nutritional status and its trends, Infant and Young Child feeding practices and Child health services.

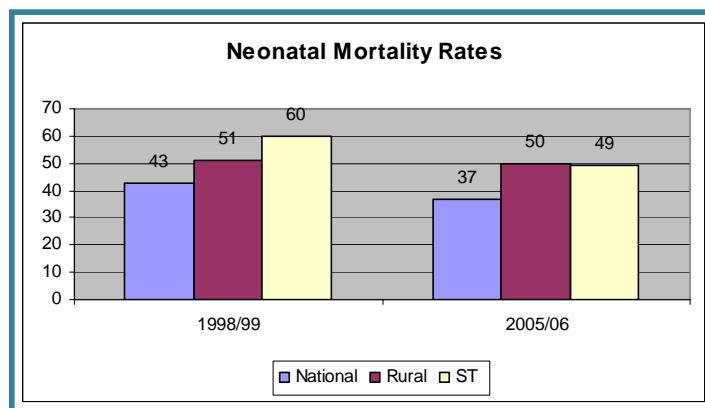
#### 5.1.1. Mortality and its trends:

##### 5.1.1.1. Findings from the Desk Review<sup>12</sup>:

Four types of mortality indicators are being tracked in children – Neonatal Mortality Rate (NMR), Infant Mortality Rate (IMR), Child Mortality Rate (CMR) and Under Five Mortality Rate (U5MR).<sup>13</sup>

#### 1. Neonatal Mortality Rate:

In the ST areas selected the NMR is currently 49 per 1000 live births while the National average lies at 37 per 1000 live births. The trend in ST is showing a reduction of 11 points between 1998/99



<sup>9</sup> The state of the world's children 2005, Table 6, Page 127.

<sup>10</sup> RCH II Document 2, The Principles and Evidence Base for State RCH II Programme Implementation Plans (PIPs) Chapter 1: Improving Health Outcomes

<sup>11</sup> Student's Handbook for IMNCI, WHO and Ministry of Health and Family Welfare, GOI, 2003.

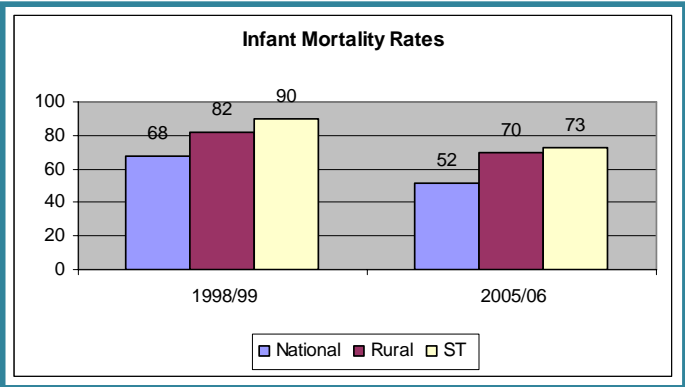
<sup>12</sup> State and national level reports of NFHS 2 and 3

<sup>13</sup> NMR – Number of deaths in the neonatal period (birth to 28 days) in a given year per 1000 live births in that year; IMR – Number of deaths in Infancy (birth to 1 year of age) in a given year per 1000 live births in that year; CMR – Number of deaths of children aged 1 to 5 years in a given year per 1000 children in the same age group in the middle of the year; U5MR – Number of deaths of children less than 5 years of age in a given year per 1000 live births in the same year.

and 2005/06.

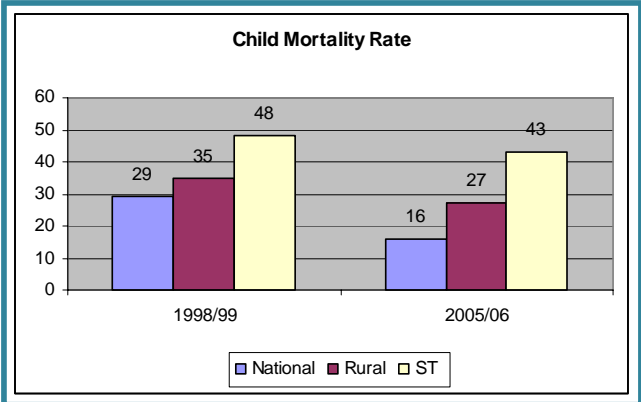
**2. Infant Mortality Rate:**

The current IMR in the ST is 73 per 1000 live births while the national average is 52. The trend between 1998/99 and 2005/06 in the ST is a reduction of 17 points. The IMR in ST is higher than the rural figures by 3 points.



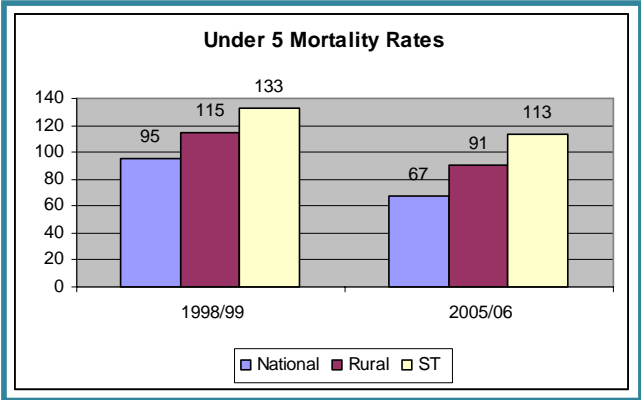
**3. Child Mortality Rate:**

The CMR is currently 43 per 1000 live births in the ST, **more than two and a half times the national average.** The trend between 1998/99 and 2005/06 shows a marginal reduction of 5 points in the ST, while the reduction is 13 points at the national level. The ST figures are higher than the rural figures by 16 points.

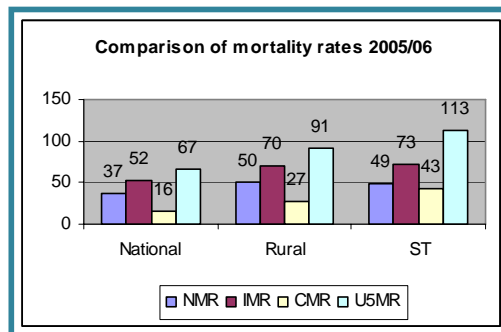
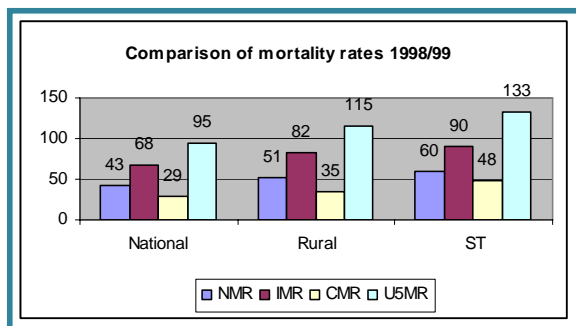


**4. Under Five Mortality Rate:**

The U5MR in the ST is currently 113 per 1000 live births as against the national average of 67. The trend between 1998/99 and 2005/06 in the ST is a reduction of 20 points while the reduction is 28 points at the national level. The ST figures are higher than the rural figures by 22 points.



## 6. Comparison of the mortality rates between 1998/99 and 2005/06:



1. Between the reference years in the ST, there is a reduction of NMR by 11 points, the IMR by 17 points, the CMR by 5 points and the U5MR by about 20 points.
2. The ST figures for child related mortality rates are higher than the rural figures except for the NMR which is nearly the same as the rural figures.

## 7. The significance of the desk review findings related to the child related mortality rates:

1. The age specific mortality rates like NMR, IMR and the CMR contribute to the U5MR. These age specific mortality rates help to point out when in Under 5 children the mortalities occur, so that specific targeted actions can be undertaken.
2. When viewed from this perspective, the IMR in the ST has reduced by 17 points mainly due to the 11 point reduction in the neonatal mortality rates. The post neonatal component of IMR has not significantly reduced.
3. The CMR, that is mortality between the age 1 and 5 is 43 in ST and is slow in reducing.
4. In short, the mortalities between 1 month to 5 years is 30 at the National level, 41 in the Rural areas and 64 in the ST areas per 1000 live births. The number of children dying in this age group in the ST areas is more than twice the national average.

### 5.1.1.2. Findings from the Field review:

During the field visit we tried to get answers for this high Mortality Rates in the ST from different levels of the health facility and the community.

We found that the **medical officers and other health providers were lacking in awareness of the extent of the mortality** in different age groups of children in their area. They said that they had not seen much mortality in children in the previous few years. As most of the child related mortalities occur at home they come to know about it through the ANMs or other health workers. When they talked about mortality in children their main focus was on the neonatal and infant mortality and not mortality between the ages of 1 to 5 years.

The health facilities (Sub centres, PHCs and the CHCs) are inadequately equipped in terms of infrastructure, supplies, man power and skills to address childhood morbidities contributing to mortalities. In addition to this, availability, accessibility and affordability issues come in the way of providing quality care to sick children.

Non availability of medical officers beyond the afternoon hours and on holidays, lack of essential medicines (and consequent need to purchase them out side) referral for lab tests, lack of facility or resources to manage serious problems which are hence referred to higher centres, lack of ambulance facilities for patient transport, difficulties related to food for in patients and discourteous treatment by the staff were mentioned by the community for their lack of faith and non compliance to treatment in the PHCs. **FGD in a tribal**

#### **hamlet**

*The community perception is poor regarding the quality of care in the PHCs. The only benefits of the PHCs according to them are incentive schemes for delivery and family planning, availability of treatment for some minor illnesses and a few emergencies.*



### **5.1.2. Nutritional status and its trends in Under 5 children:**

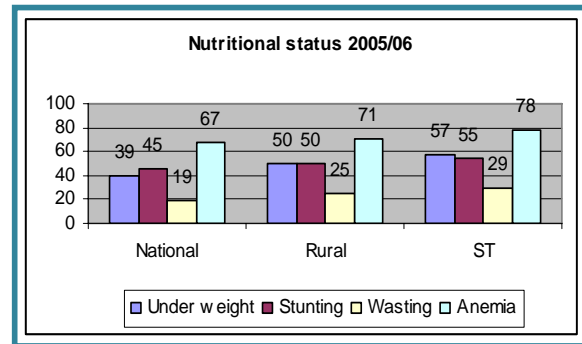
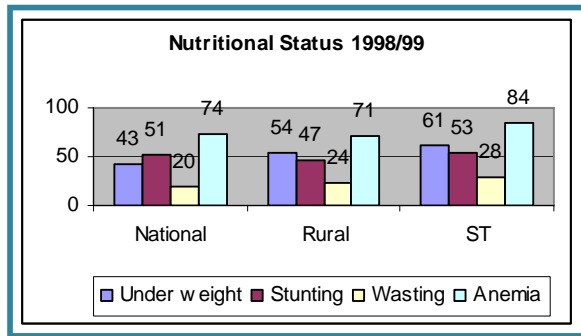
#### **5.1.2.1. Findings from the desk review<sup>14</sup>:**

**Under weight, stunting and wasting and percentage of anemia** are the indicators tracked by the NFHS surveys to monitor the nutritional status of children.<sup>15</sup>

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<sup>14</sup> NFHS 2 and 3 National and State level reports

<sup>15</sup> Under weight is low weight for Age and it denotes Acute malnutrition; Stunting is low Height for Age and it denotes Chronic malnutrition; Wasting is low Weight for Height and it denotes Past malnutrition.



### Significance of the desk review findings related to the nutritional status:

1. Currently, 6 out of 10 children are both acutely and chronically undernourished, 3 out of 10 show past under nutrition and 8 out of 10 are anemic in the ST.
2. All the parameters for under nutrition are higher in the ST than the National and the rural average. 57% of ST children are Underweight (Rural - 50% and National - 39%), 55% stunted (Rural - 50% and National 45%), 29% wasted (Rural - 25% and National 19%) and 78% anemic (Rural - 71% and National - 67%).
3. There is a marginal increase in the percentages of ST children with Stunting and Wasting and only a minimal decrease in the percentages of children with Underweight and Anemia between 1998/99 and 2005/06.

“Malnutrition is the underlying cause of half the deaths for children under 5 years of age. Even mild and moderate malnutrition have severe consequences. More than 80 percent of deaths associated with childhood malnutrition involve mild or moderate, rather than severe, malnutrition”<sup>16</sup>.

#### 5.1.2.2. Findings from the field review:

During the field visit we found that the causes for the poor nutritional status are lack of access to appropriate quantity and quality of food due to migration of parents for work, poverty, ignorance, lack of awareness, alcoholism in parents (both parents consume alcohol) lack of birth spacing, teenage pregnancies, poor health care. Most of the reasons go beyond the health sector which can only provide a necessary infrastructure and ensure its efficient

<sup>16</sup> Nutrition Essentials A Guide For Health Managers, UNICEF, Chapter 1.

functioning.

Among the important target groups for the nutritional intervention at the Anganwadi are women, particularly pregnant and breastfeeding women and children under 2 years of age. Yet in the nutritional interventions of the AWC, the needs of this target group are not adequately addressed. Most of the children who come to the centre are above the age of 2 years. Children in the most important age group of 6 months to 2 years, when the weaning process is started, are at the peril of developing nutritional deficiencies. It is this age group for whom both nutritional supplementation and meticulous growth monitoring are most essential. This aspect is often not addressed at the AWCs.

At the Community level (FGD) one of the reasons given for under nutrition is not having enough food both in quality and quantity, due to poverty. "At times our children lick only salt for a meal to reduce hunger (Orissa), or eat only rice. (Jharkand)

### **5.1.3. Infant and Young Child Feeding practices:**

#### ***5.1.3.1. Desk review findings:***

The parameters that are studied under this are Breastfeeding within 1 hour of birth, Breastfeeding within 1 day of birth, Use of prelacteal feeds, Median duration of exclusive breast feeding and following of all 3 recommendations of IYCF<sup>17</sup>. As per this recommendation, in ST only 27% of children are put to breast within an hour of birth, 42% are given prelacteal feeds. The median exclusive breast feeding duration is 3 months. Only for 13% of the children are all the three recommendations of IYCF practice followed.

#### ***5.1.3.2. Findings from Field review:***

The field visits to the tribal areas confirmed the existence of the above practices and the PHC medical officers and the ANMs are aware of them. Wet nursing (even if the mother has her own breast milk - in Jharkhand) is still being practiced. Giving prelacteal feeds are more common in home deliveries than institutional deliveries. Weaning is also related to availability of and access to suitable feeds despite the age of the child.

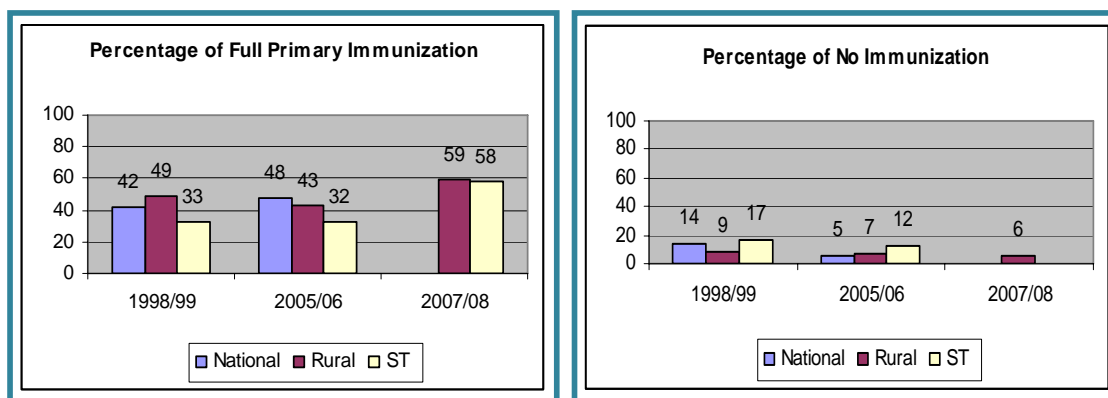
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<sup>17</sup> World Health Organization (WHO) gives three recommends regarding breastfeeding and weaning (Infant and Young Children Feeding practice- IYCF)- exclusive breastfeeding upto 6 months of age, and for 6 to 23 months: continued breastfeeding or feeding with appropriate calcium-rich foods if not breastfed; feeding solid or semi-solid food for a minimum number of times per day according to age and breastfeeding status; and, including foods from a minimum number of food groups per day according to breastfeeding status.- NFHS 3 reports

#### 5.1.4. Child Health Services:

##### 5.1.4.1. Immunization:

###### 1. Findings from Desk review<sup>18</sup>:



Among the ST children in the selected states, 32% (1 in 3) received full primary immunization (National – 48%, Rural – 43%) and 12% (1 in 8) no immunization (National – 5%, Rural – 7%)<sup>19</sup>. The ST figures are worse than the National and rural figures. There has been no appreciable improvement in trend between 1998/99 and 2005/06.

After the implementation of NRHM, the percentage of children who received full primary immunization in the rural areas has increased to 58% as per the data of 2007/08(DLHS 3). Separate data for the ST areas is not available.

###### 2. Findings from Field review:

During the field visit we tried to elicit the reasons for the poor vaccination coverage. The PHC Medical Officers said that after the implementation of the NRHM, the vaccination coverage has improved. The community also reported that they are getting their children immunized. We could not find supporting statistical evidence for the increase in immunization coverage for validation in the ST areas.

The reasons cited for poor coverage from the provider angle are poor accessibility in hilly and forested areas especially during monsoons, irregular supply/short supply of vaccines, shortage of health manpower, need to procure the vaccines from the CHC/FRU once or twice a week as the ILR and DF in the PHC are not functional and demand from people for

<sup>18</sup> NFHS 2, 3 State and National level reports and DLHS 3 State and National level fact sheets

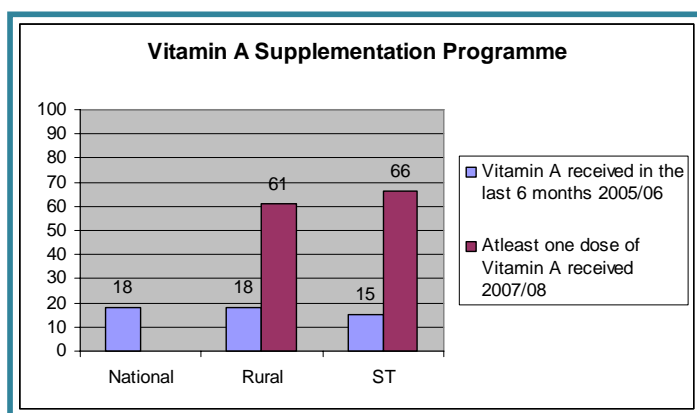
<sup>19</sup> NFHS 3 state level and National reports

door to door service (practice initiated by Pulse Polio Programme). In addition, migration of parents for work, mother taking baby with her to work, illiteracy, ignorance, superstitions, misconceptions & cultural beliefs add to the challenges in vaccination programmes.

Irregular and prolonged periods of lack of electricity, which cannot be tided over by invertors or generators (only 51% of the PHCs visited had regular electricity and 27% had back up generator), breakdown of cold storage equipments (not repaired in time), poor quality of vaccine carriers in some areas and frequent opening of the vaccine carrier in the field for door to door immunization are the main hurdles in maintaining cold chain.

#### 5.1.4.2. Vitamin A supplementation Program:

Findings from the Desk review<sup>20</sup>:



The performance of this programme shows that only 15% of the ST children received Vitamin A in the previous 6 months and this is less than in the rural and National figures. The percentage of children who have received at least one dose in the ST districts is higher than the percentage of children who have received 3 doses

indicating that the problem may lie in the supply / distribution mechanism.

#### 5.1.4.3. Appropriateness of treatment for and awareness about some important childhood illness:

Findings from the Desk review<sup>21</sup>:

The illnesses that have been focused are Acute Respiratory Infection, Diarrhoea and Malaria. In the ST, only 1 in 8 children get appropriate treatment for ARI (13%) and Malaria (12%) and 1 in 3 for Diarrhea (29%). Only 60% of ST women are aware of the importance of Oral Re hydration Solutions in diarrhoea.

<sup>20</sup> NFHS 3 National and state level reports and DLHS 3 National and state level fact sheets

<sup>21</sup> NFHS 3 National and state level reports

### 5.1.5. Concerns in Under Five Child Health:

1. The Crude Birth Rates in the ST are not available from the desk review materials.
2. The desk review shows that mortalities between 1 month to 5 years is 30 at the National level, 41 in the Rural areas and 64 in the ST areas per 1000 live births. The number of children dying in this age group in the ST areas is more than twice the national average. It is higher than the rural figures. The medical officers and other health providers interviewed during the field visit were found lacking in awareness of the extent of the mortality in different age groups of children in their area.
3. The health facilities, SC, PHC and CHC are inadequately equipped in terms of infrastructure, supplies, man power and skills to address illnesses which contribute to the morbidity and mortality in children. In addition to this, availability, accessibility and affordability issues come in the way of providing quality care to sick children.
4. The percentage of children who receive appropriate treatment for important childhood illnesses is low across the country as well as in the ST areas. In the ST, only 1 in 8 children get appropriate treatment for ARI (13%) and Malaria (12%) and 1 in 3 for Diarrhea (29%). Only 60% of ST women are aware of the importance of Oral Rehydration Solutions in diarrhoea.
5. All the parameters for under nutrition are higher in the ST than the National and the rural figures. 57% of ST children are Underweight (Rural - 50% and National - 39%), 55% stunted (Rural - 50% and National 45%), 29% wasted (Rural - 25% and National 19%) and 78% anemic (Rural - 71% and National - 67%). The causes for the poor nutritional status are lack of access to appropriate quantity and quality of food due to poverty and reasons which go beyond the health sector which can only provide a necessary infrastructure and ensure its efficient functioning. In the nutritional interventions of the AWC, the nutritional needs of the children in the crucial age bracket (6months to 2 years) are not being addressed although the scheme (ICDS) covers the age group 0 to 3 years also. Only for 13% of the children are all the three recommendations of IYCF practice (recommended by WHO) followed.
6. Among the ST children in the selected states, 32% (1 in 3) received full primary immunization (National - 48%, Rural - 43%) and 12% (1 in 8) no immunization (National- 5%, Rural - 7%) as per the data of 2005/06 (NFHS 3). The ST figures are

lower than the national and rural figures. There has been no appreciable improvement in trend between 1998/99 and 2005/06. The inadequate coverage of immunization is related to difficulties in availability, procurement, storage, maintenance of cold chain of vaccines and accessibility of the target population. The ST figures of immunization coverage are lower than the rural figures. Only 15% of the ST children received Vitamin A in the previous 6 months and this is less than in the rural and national figures.

## 5.2. Maternal Health:

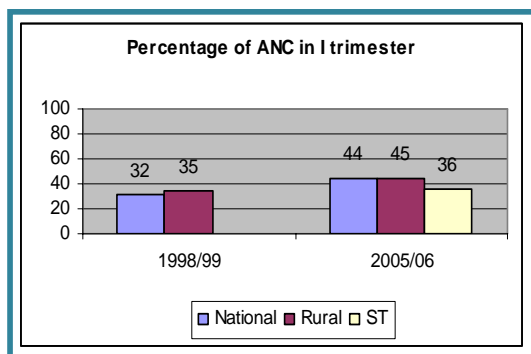
The areas that are researched under maternal health are Ante Natal Care, Delivery care, Post natal care, Fertility, Family planning and Teenage pregnancy.

### 5.2.1. Ante Natal Care:

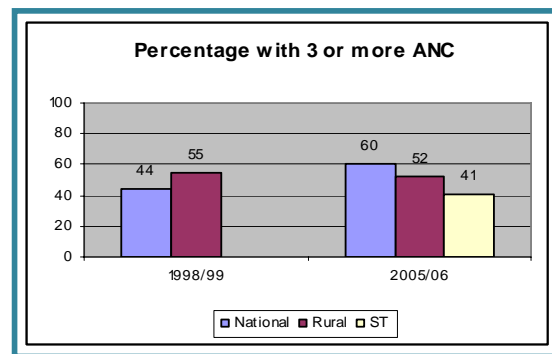
#### 5.2.1.1. Desk review findings<sup>22</sup>:

Antenatal care (ANC) refers to pregnancy-related health care, which is usually provided by a doctor, an ANM, or another health professional. Ideally, antenatal care should monitor a pregnancy for signs of complications, detect and treat pre-existing and concurrent problems of pregnancy, and provide advice and counseling on preventive care, diet during pregnancy, delivery care, postnatal care and related issues. In India, the Reproductive and Child Health Programme aims at providing at least three antenatal check-ups which should include a weight and blood pressure check, abdominal examination, immunization against tetanus, iron and folic acid prophylaxis, as well as anaemia management.<sup>23</sup>

#### 1. Coverage:



In the



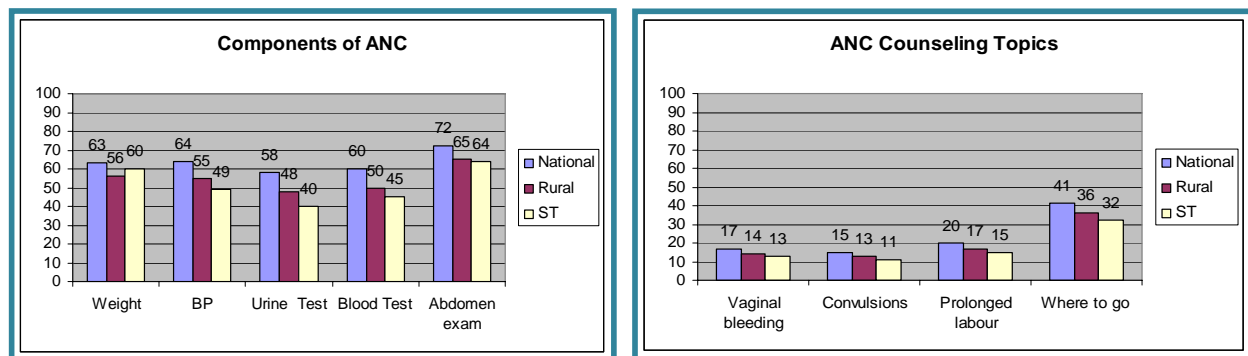
ST, only 36% (National - 44%, Rural - 45%) of the pregnant woman are registered for ANC in the I trimester, 41% (National - 60%, Rural - 52%) receive mandatory 3 ANC and 28% do

<sup>22</sup> NFHS 2 and 3 National and State level reports

<sup>23</sup> NFHS 3 National report, Page 241, Vol. 1.

not have any ANC. The ST figures for ANC coverage are lower than the rural figures. Not all the pregnant women who are given IFA actually consume them. Though 63% of the pregnant women receive IFA tablets only 21% of them actually consume them for the mandatory 100 days.

## 2. Components of care:



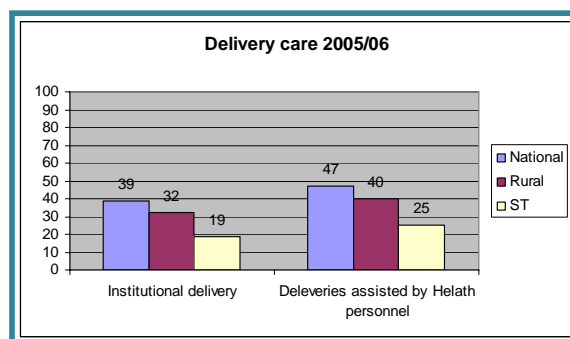
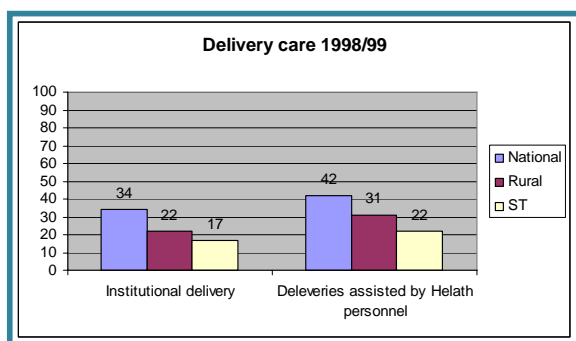
The basic important components of the ANC are check up of Weight, Blood Pressure, Urine, Blood and Abdomen. Basic information that needs to be given to the woman and the family is about vaginal bleeding, convulsions, prolonged labour and where to go if there are complications.

40 to 64 % of the pregnant women in the ST areas receive varying individual components of ANC. Only 32% of the pregnant women in the ST areas are told where to go if they experienced pregnancy related complications and 11 to 15 % are given information on specific pregnancy complications. The important aspect of delivery preparedness and where to go if there are complications are not discussed with all the women. The percentage of women who receive all the basic components is not available from the reports.

**During the field visit** the medical officers and the ANMs mentioned that after the implementation of the NRHM and its incentivization schemes there has been significant improvement in ANC registration but this could not be validated due to non availability of supporting documents.

## 5.2.2. Delivery care:

### 5.2.2.1. Findings from Desk review<sup>24</sup>:



Only 1 in 5 deliveries in ST is institutional and 1 in 4 is assisted by Health Personnel<sup>25</sup> (HP) as per reports from 2005/06. These figures are much lower than the national average and the trend shows only a marginal increase in the ST.

### 5.2.2.2. Findings from the field review:

#### Labour room in a subcentre



#### Labour room in a PHC



The medical officers and the ANMs reported that the institutional deliveries have increased since the last one year to 25 to 70% due mainly to the incentive schemes. As per the DLHS 3 report (2007/08) the average percentage of institutional deliveries in the selected tribal districts visited, is 38. The deliveries take place mainly in the PHCs or the FRU and not in the Sub centres.

In spite of the incentive schemes, there are difficulties in promotion of institutional deliveries due to poor delivery preparedness, accessibility, difficult inaccessible terrain, communication and transportation related difficulties, non availability of nurse or medical officer after 4 pm, and on holidays, lack of lady medical officer, inadequate facilities in the

<sup>24</sup> NFHS 2 and 3 National and State level reports; DLHS 3 State level fact sheets.

<sup>25</sup> Health personnel as per NFHS 3 are Doctors, auxiliary nurse midwife, nurse, midwife, lady health visitor or other health personnel.

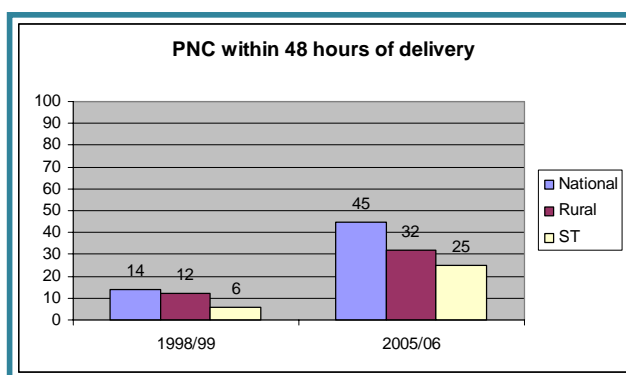
PHC, corruption at the institutional levels, lack of courteous care, difficulty in getting the incentive amount in time and cultural beliefs and misconceptions.

We found that the infrastructural facilities, medical and paramedical human resources have not improved much. This questions the validity of the claims of the medical officers and the ANMs made before the team. **We feel that just bringing the pregnant women to the institution for delivery does not address the basic need for appropriate and optimal care during delivery as the facilities are lacking in resources. It seems that there is not much difference between home and hospital deliveries in terms of quality of care.**

### 5.2.3. Post Natal Care:

#### 5.2.3.1. Findings from Desk review<sup>26</sup>:

On an average, in ST, 1 in 4 (25%) women gets PNC within 48 hours of delivery (National - 45%, Rural 32%). Percentage of women who have a PNC within 48 hours of delivery in ST ranges from 10 to 47 in 2005-2006. The more recent figures for the ST districts studied (DLHS 3 - 2007-2008) show an increase in the figure to 56%. We could not get figures for maternal mortality from the reports studied (NFHS and DLHS).



#### 5.2.3.2. Findings from field review:

##### Delivery in a PHC

The medical officers stated that they are able to give PNC within 48 hours for only institutional deliveries and not for all home deliveries. In Orissa in the ST districts of Koraput and Mayurbanj, the DLHS 3 (2007/08) report states that the PNC within 48 hours of delivery is 100% and 95.7% respectively, though the percentage of institutional deliveries is only 11.6% and 40.3%. It is difficult to take the claim of 100% PNC. It is possible that the claim pertains to institutional deliveries only.

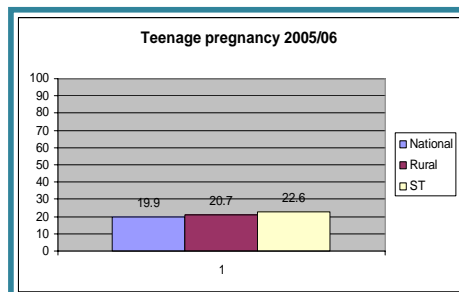
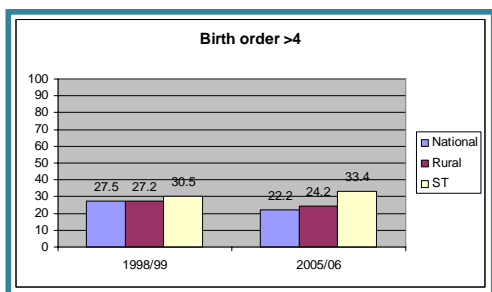
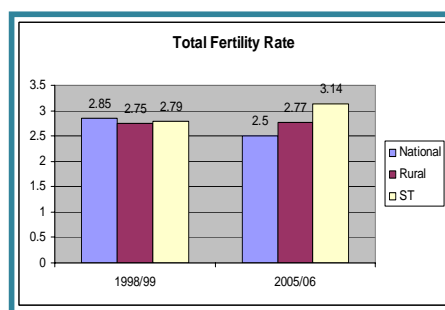
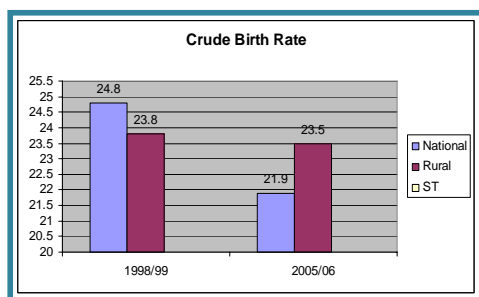


<sup>26</sup> NFHS 2 and 3 National and State level reports; DLHS 3 State level fact sheets.

Providing PNC for home deliveries is a challenge as many deliveries do not get reported immediately. The health personnel do not come to know of the home delivery as people do not voluntarily report the event. The customs like isolation of mother and child in the house for 12 days after delivery and mother shifting to her mother's house immediately after delivery and misconception that heavy Post Partal Haemorrhage is good in removing impurities from the body are the other challenges in providing PNC.

In Maharashtra, mother development camp is conducted periodically when a card is given to the pregnant lady with the phone numbers of the ANM and other details as to whom to contact in case of deliveries. This has helped in improving PNC for home deliveries through the ANM or ASHAs.

The medical officers are of the opinion that maternal mortality has reduced and that they tend to occur in home deliveries. Sepsis, post partal hemorrhage and anemia continue to be the commonest delivery related complications. Yet, the PHC or the FRU is ill equipped to deal with such events. Only 40% of the FRU can manage the obstetric emergencies and only 14% have blood storage facilities. Apart from mortality, the magnitude of the morbidity (so called near miss events) related to child birth is not known. The importance of maternal



morbidity goes beyond the mother and affects the newborn as well. Status of unsafe abortions in the ST areas has not been recorded.

#### **5.2.4. Fertility Indicators:**

##### ***5.2.4.1. Findings from Desk review<sup>27</sup>:***

The indicators of fertility that are studied are Crude Birth Rate (CBR), Total Fertility Rate, Birth order of >4, and Teenage pregnancy. There is no record of Crude Birth Rate (CBR) in ST. The other indicators like Total Fertility Rate, Birth order of >4, and Teenage pregnancy in ST are higher than the National and rural figures as shown in the charts given above.

In Karnataka, the TFR in ST has increased from 2.38 to 2.53 and the birth order of >4 from 18 to 24, while the decadal growth rate for the ST in Dakshin Kannada has shown a negative growth of 2.9%<sup>28</sup>. This is a cause for concern and it needs to be studied further. Every 4<sup>th</sup> pregnancy in the ST areas is a teenage pregnancy.

##### ***5.2.4.2. Findings from field visit:***

We found that there is lack of awareness among the medical officers and the ANMs about the magnitude of teenage pregnancies in ST. Some of the medical officers interviewed said that as there are no age records for the ST it is difficult to know the extent of the problem. The medical officer and the community felt that it is a difficult problem to address as marriages are by elopement. In addition, migration for work leads, in some instances, to exploitation of teenage girls who end up becoming pregnant. No specific health education program seems to be undertaken by the health staff to address this issue. The other indicators of fertility like TFR and birth order >4 are linked to the family planning activities.

#### **5.2.5. Family Planning Indicators:**

##### ***5.2.5.1. Findings of the Desk review<sup>29</sup>:***

The total unmet need for Family Planning in the ST is 25% for the selected states. It is 13% at the national level and 14%% for the rural population. While people prefer to go to a governmental source for female sterilization, they prefer private provider for Pills and Condoms. The reasons for under utilization of governmental source for pills and condoms are not evident from the reports.

##### ***5.2.5.2. Findings from the field review:***

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<sup>27</sup> NFHS 2 and 3 National and state level reports

<sup>28</sup> Human development Report, 2005, Chapter 10

<sup>29</sup> NFHS 3 National and State level reports

We learnt various reasons for acceptance and non acceptance of the different methods of Family Planning. They ranged from cultural beliefs to imagined or actual side effects of the methods.

Medical Termination of Pregnancy services were available in only 53% of the CHCs visited.

During the field visit to Malpahadi in Jharkhand we met a ST woman who had given birth to 8 children two of whom had died. She said that she could not undergo sterilization because the medical officer told her that the government had passed orders not to do sterilization. We could not validate the claim of the lady with the health officials.

### **5.2.6. Concerns in the field of Maternal Health:**

1. Only 36% of the pregnant woman are registered for ANC in the I trimester, 41% receive mandatory 3 ANC and 28% do not have any ANC. 63% of the pregnant women receive IFA tablets but only 21% of them actually consume them for the mandatory 100 days. Among those registered for ANC, 40 to 64% receive varying individual basic important components of the ANC. The percentage of women who receive all the basic components is not available from the reports. Only 32% of the pregnant women are told where to go if they experienced pregnancy related complications and 11 to 15 % of the pregnant women are given information on specific pregnancy complications. The important aspect of delivery preparedness and where to go if there are complications are not discussed with all the women.
2. Only 1 in 5 deliveries in ST is institutional deliveries and 1 in 4 is assisted by health personnel in 2005 - 2006. In spite of the incentive schemes, there are difficulties in promotion of institutional deliveries. Although institutional deliveries in ST areas are reported to have increased considerably after the initiation of NRHM from the low level of 20%, the issue is still a matter of concern. The deliveries take place mainly in the PHCs or the FRU and not in the Sub centres.
3. The infrastructural facilities, medical and paramedical human resources have not improved much. We feel that just bringing the pregnant women to the institution for delivery does not address the basic need for appropriate and optimal care during delivery as the facilities are lacking in resources. It seems that there is not much difference between home and hospital deliveries in terms of quality of care in the PHCs.

4. On an average, 1 in 4 women gets PNC within 48 hours of delivery. The health staffs are able to give PNC within 48 hours for only institutional deliveries and not for all home deliveries. In Orissa in the ST districts of Koraput and Mayurbanj, the DLHS 3 (2007/08) report states that the PNC within 48 hours of delivery is 100% and 95.7% respectively, though the percentage of institutional deliveries is only 11.6% and 40.3%. It is difficult to take the claim of 100% PNC. It is possible that the claim pertains to institutional deliveries only.
5. Figures for maternal mortality are not available in the reports studied (NFHS and DLHS). The medical officers are of the opinion that maternal mortality has reduced and that they tend to occur in home deliveries. Sepsis, post partal hemorrhage and anemia continue to be the commonest delivery related complications. Yet, the PHC or the FRU is ill equipped to deal with such events. Only 40% of the FRU can manage the obstetric emergencies, 14% have blood storage facilities and 53% have facilities for Medical Termination of Pregnancy. Apart from mortality, the magnitude of the morbidity (so called near miss events) related to child birth is not known. The importance of maternal morbidity goes beyond the mother and affects the newborn as well. Status of unsafe abortions in the ST areas has not been recorded.
6. The other indicators like Total Fertility Rate, Birth order of >4, and Teenage pregnancy in ST are higher than the National average. TFR : ST - 3.14, National - 2.5, Rural - 2.77; Birth order >4: ST - 33.4, National - 22.2, Rural - 24.2; Teenage pregnancy : ST - 22.5, National - 19.9, Rural - 20.7. In Karnataka, the TFR in ST has increased from 2.38 to 2.53 and the birth order of >4 from 18 to 24, while the decadal growth rate for the ST in Dakshin Kannada has shown a negative growth of 2.9%<sup>30</sup>. This is a cause for concern and it needs to be studied further. Every 4<sup>th</sup> pregnancy in the ST areas is a teenage pregnancy, yet, neither the medical officers nor the ANMs were aware of the magnitude of teenage pregnancies in ST.
7. The total unmet need for FP in the ST is 25% for the selected states. It is 13% at the national level and 14%% for the rural population. Medical Termination of Pregnancy services were available in only 53% of the CHCs visited.

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<sup>30</sup> Human development Report, 2005, Chapter 10

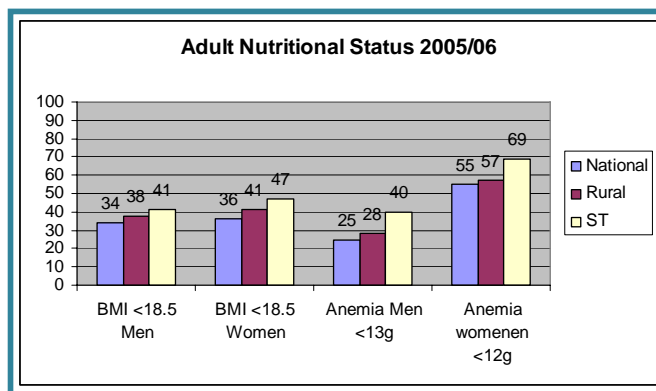
### 5.3. Adult Health:

The indicators for Nutritional status, certain important Communicable and Non communicable illnesses are studied under Adult Health.

#### 5.3.1. Nutrition:

##### 5.3.1.1. Desk review findings<sup>31</sup>:

41% of ST men (National - 34%; Rural - 38%) and 47% of ST women (National - 36%; Rural - 41%) are undernourished with the BMI of <18.5. 40% of ST men (National - 25%; Rural - 28%) and 69% of ST women (National - 55%; Rural 57%) are anemic.



##### 5.3.1.2. Findings from the field visit:

From the interaction with the community we learnt that lack of access to adequate quality and quantity of food due to poor economic conditions, need for migration for gainful occupation, ineffective public distribution system and social problems like alcohol abuse is the main reason for the poor nutritional status of the population. At the state level we learnt that Maharashtra is implementing a programme called Khawati programme - This is to prevent nutritional deprivation in ST. To tide over lean season before and during the monsoon, advance is given to ST in the form of food grains, oil etc. This can be repaid or waived depending upon the forthcoming harvest.

#### 5.3.2. Communicable illnesses:

The illnesses that are focused on are Tuberculosis, Malaria, Kala azar and HIV

<sup>31</sup> NFHS 3 National and State level reports

### 5.3.2.1. Tuberculosis:

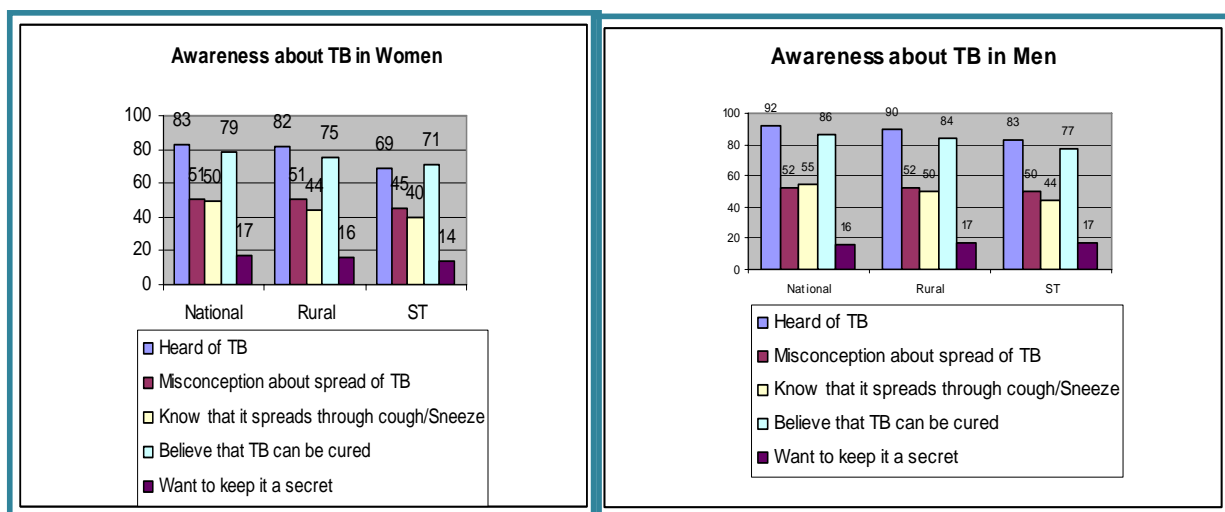
#### Desk review findings:

1. Prevalence of Tuberculosis: There are no disaggregate figures for prevalence of tuberculosis in ST.

2. Performance of RNTCP in ST:

The cumulative figures for the ST districts across the nation show that the targets for RNTCP have been reached as per the annual report for 2008<sup>32</sup>. However, among the states selected for the study, 6 districts have not achieved the national target for detection of New Sputum Positive (NSP) cases and 5 districts have not achieved the national target for cure rate of NSP cases.

3. Awareness indicators about Tuberculosis in the ST are not on par with the national average.



#### Findings from the field visit:

We found that not all the PHCs are DOTS centres. 83% of the PHCs visited were DOTS centres and 10% were DMCs. The role of the medical officers in the PHCs with regard to DOTS programme does not seem to extend beyond case detection.

<sup>32</sup> TB India 2009, RNTCP Status Report.

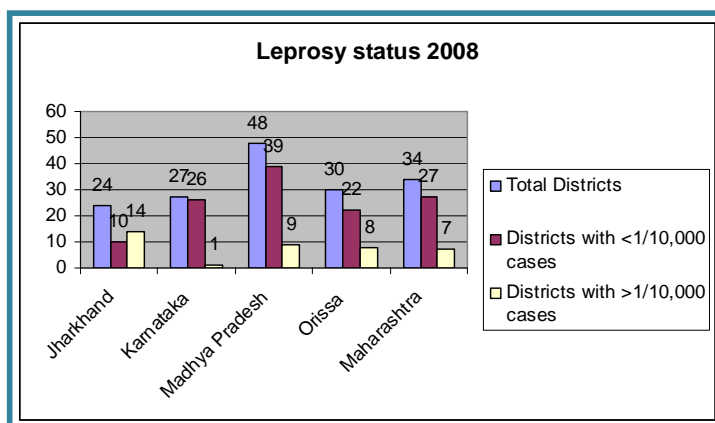
The main problem mentioned with regard to case detection are - Ignorance, lack of awareness in the community, delay in sample collection, only one DMC per block, unfilled vacancies for the post of laboratory technician, need to travel long distances for sputum examination, houses being scattered and far away from the PHC. The problems in case holding and treatment are - Lack of awareness about the need to continue treatment, stopping treatment as the patient feels better, long duration of treatment, migration for work, difficulty in follow up due to long distances from the health facility. The awareness about TB in ST areas has been found to be 70% and about the DOTS programme 60%.

Implementation of the DOTS programme is a challenge for the NGOs working in the Tribal areas. With the problems in case detection and case holding, it is difficult to understand how the targets for RNTCP have been reached in the ST districts.

### 5.3.2.2. Performance indicators for Leprosy, Malaria and Kala Azar<sup>33</sup>:

#### 1. Desk review findings:

Separate figures for the ST are not available for comparison or for understanding the trend. In general all the states recorded a lessening trend (except Jharkhand where Plasmodium Falciparum malaria morbidity has increased) in both mortality and morbidity as per the reports of the programmes.



Malaria:

States	Total cases		Faciparum cases		Deaths	
	2007	2008	2007	2008	2007	2008
Jharkhand	184878	184007	45,926	56,342	31	17
Karnataka	49,355	44,370	11,295	9,245	18	7
Madhya	90,829	99,408	36,694	38,632	41	0

Pradesh						
Orissa	371879	260841	323150	128040	221	137
Maharashtra	67,850	61,267	22,691	18,961	182	150

Kala Azar:

States	Total cases		Deaths	
	2007	2008	2007	2008
Jharkhand	4803	3368	20	5
Karnataka	0	0	0	0
Madhya Pradesh	0	1	0	0
Orissa	0	0	0	0
Maharashtra	0	0	0	0

## 2. Findings from the field visit:

The PHC Medical Officers said that the reduction in the morbidity and mortality of these diseases was brought about mainly by health education and implementation of the programmes as per guidelines. In Maharashtra, Using Gambusia fish for reducing mosquito larvae, distributing insecticide impregnated mosquito nets, observation of dry day (all stored water being emptied once a week & spraying on stagnant water) use of radical treatment and depot holder program (medicines given to community like Gram Panchayat members, police etc.) are the important measures taken to address the problem of Malaria. There is a feeling in some medical officers that there could be under reporting of cases of Leprosy in Maharashtra. In some of the PHCs there was shortage of anti malarians especially the pediatric formulations. Migration for work is felt to be a major challenge in addressing these diseases.

<p>During the field visit we found that one of the PHCs in Jharkhand had recorded 600 cases of fever in that month and 200 of them were cases of Malaria, indicating the high prevalence of the problem.</p>
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### 5.3.2.3. HIV/AIDS:

#### 1. Desk review findings<sup>34</sup>:

Prevalence:

Prevalence of HIV infection in the ST is not available. It is 0.35% for urban and 0.25% for rural population at the national level. It is the same for the states of Orissa, Jharkhand and Madhya Pradesh. Maharashtra and Karnataka have higher prevalence. (Maharashtra 0.62; Karnataka 0.54 for the Urban and 0.75 for the rural population).

Awareness:

Indicators for the ST show that 8% of women and 20% of men have comprehensive knowledge about HIV<sup>35</sup>.

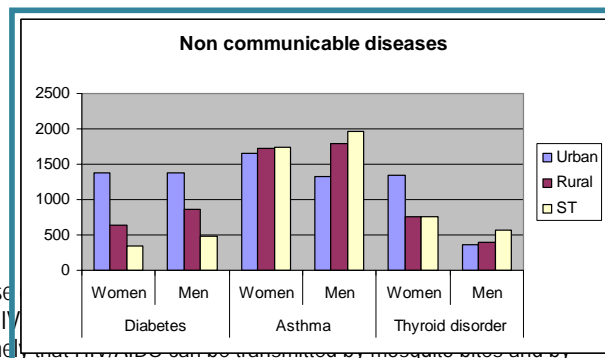
#### 2. Findings from the field review:

We found that specific measures to address this problem have not been implemented at the state levels except in Maharashtra and Karnataka where both governmental and NGO initiatives are addressing the problem in general. Though HIV screening in pregnant women is recommended in the country there are no facilities for screening in three of the states visited. ICTC facilities are not easily available in the PHCs or FRUs. People need to go to the District hospitals for these services.

### 5.3.3. Non communicable illnesses:

#### 5.3.3.1. *Desk review findings*<sup>36</sup>:

The focus is on Diabetes mellitus, Asthma and Thyroid disorder. The figures for non communicable illnesses from the NFHS 3 report which is quoted in the chart are



<sup>34</sup> NFHS 3 National and State level reports

<sup>35</sup> Respondents with comprehensive knowledge say that the use of a condom with an uninfected faithful partner can reduce the chance of getting HIV. They also reject the two most common misconceptions in NFHS-3, namely, that HIV/AIDS can be transmitted by mosquito bites and by sharing food. NFHS 3.

<sup>36</sup> NFHS 3 National and State level reports

based on the people's response when asked if they have these illnesses and hence the results may not be accurate estimates of these problems. The figures are for 100,000 population. Prevalence of Diabetes mellitus is low in ST population, but Asthma is very high as per the available reports compared to the rest of the population.

#### **5.3.3.2. Findings from the field visit:**

We found that there is low awareness amongst the PHC Medical Officers about the prevalence of genetic diseases in ST. The non communicable diseases that are seen in ST are Type I Diabetes mellitus, Hypertension, Asthma, Acid peptic diseases and Throat cancer. The trend, according to the medical officers interviewed, is either constant or slowly increasing. At the PHC level the resources are inadequate to address these diseases and hence the patients have to go to the FRU or the district hospital for diagnosis and treatment.

#### **5.3.4. Concerns in Adult Health:**

1. 41% of ST men (National - 34%; Rural - 38%) and 47% of ST women (National - 36%; Rural - 41%) are undernourished with the BMI of <18.5. 40% of ST men (National - 25%; Rural - 28%) and 69% of ST women (National - 55%; Rural 57%) are anemic. The nutrition of adolescent girls, pregnant and lactating women bears a direct relationship with the nutrition of the child. The AWC does not adequately address this section.
2. Disaggregate figures for the prevalence of tuberculosis for the state are not available. The awareness about tuberculosis and DOTS in ST is 70% and 60% respectively. Though cumulative figures for the ST districts across the nation show that the targets for RNTCP have been reached as per the annual report for 2008, during the field visit, it was learnt the health functionaries faced challenges in case detection and case holding. With these problems, it is difficult to understand how the targets for RNTCP have been reached in the ST districts.
3. Disaggregate figures for the ST in the areas of Leprosy, Kala Azar and Malaria are not available.
4. Prevalence of HIV infection in the ST is not available. Awareness indicators for the ST show that 8% of women and 20% of men have comprehensive knowledge about HIV. Specific measures to address this problem have not been implemented at the state levels except in Maharashtra and Karnataka. Though HIV screening in pregnant women is recommended in the country there are no facilities for screening in three of the states

visited. ICTC facilities are not easily available in the PHCs or FRUs and people need to go the District hospitals for these services.

5. There is low awareness amongst the PHC MOs about the prevalence of genetic diseases in ST. At the PHC level the resources are inadequate to address the non communicable diseases and hence the patients have to go to the FRU or the district hospital for diagnosis and treatment.

#### ***5.4. Other factors that contribute to the Health status:***

##### **5.4.1. Source of Health care:**

###### ***5.4.1.1. Desk review findings<sup>37</sup>:***

Though separate ST data are not available, for nearly 40% of the rural and Lowest two wealth index categories<sup>38</sup>, to which most of the ST population belong, Government facilities are the source of health care. The remaining 60% seek private providers.

###### ***5.4.1.2. Findings from the field visit:***

The PHC Medical Officers mentioned the following reasons for preference for private source of health care:

People feel that better facilities are available with the private providers, they are not referred to other places generally, they are easily accessible and available, services are available around the clock, private providers even do house calls, they are better in emergencies and for short term care.

The community said that they go to government facility only if there are no alternatives and for illnesses that need long term care. They also access health care from unqualified/unregistered health professionals (“Jolachap doctors”). We observed that there is high prevalence of dual practice by Government medical officers.

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<sup>37</sup> NFHS 3 National report Vol. 1.– Source of Health care- page 436, 437.

<sup>38</sup> Wealth index is based on the following 33 assets and housing characteristics: household electrification; type of windows; drinking water source; type of toilet facility; type of flooring; material of exterior walls; type of roofing; cooking fuel; house ownership; number of household members per sleeping room; ownership of a bank or post-office account; and ownership of a mattress, a pressure cooker, a chair, a cot/bed, a table, an electric fan, a radio/transistor, a black and white television, a colour television, a sewing machine, a mobile telephone, any other telephone, a computer, a refrigerator, a watch or clock, a bicycle, a motorcycle or scooter, an animal-drawn cart, a car, a water pump, a thresher, and a tractor - NFHS-3 National report, Vol.1.

## 5.4.2. Quality of care:

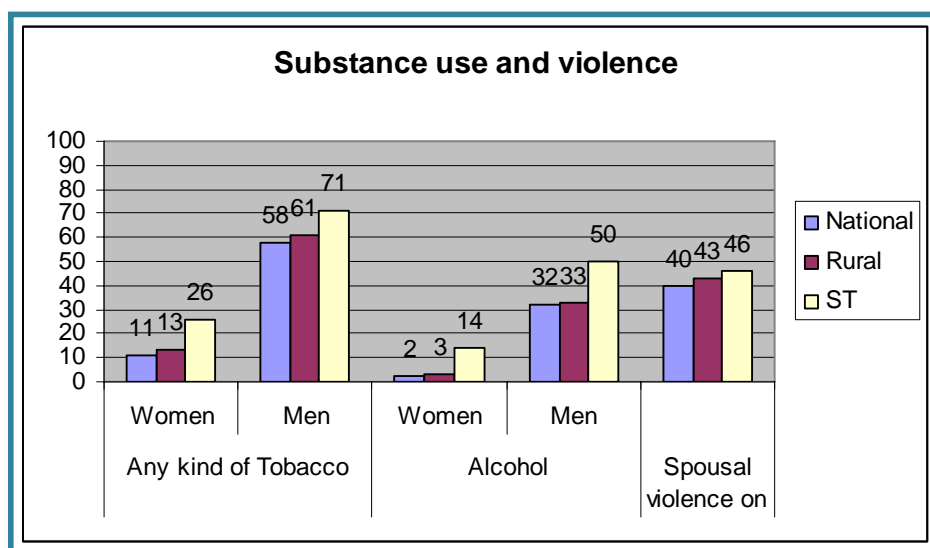
### *Desk review findings<sup>39</sup>:*

Among households that do not use government health facilities, the main reasons given for not doing so are poor quality of care (51%), lack of a nearby facility (45%), and long waiting times (32%). Separate ST data are not available.

Only 20 percent of women had contact with any health worker in the previous 3 months. Such contact took place mostly at Home or the AWC. 3 most common topics of health education during such contact were Immunization, disease prevention and medical treatment of the sick. Other important topics related to RCH were not discussed to the extent needed.

## 5.4.3. Social issues - substance use and violence:

### *5.4.3.1. Desk Review findings<sup>40</sup>:*



26% of women and 71% of Men in ST (National : Women – 11%, Men – 58%; Rural : Women – 13%, Men – 61%) use tobacco in some form or the other and 14% of ST women and 50% of ST men use alcohol (National : Women – 2%, Men – 32%; Rural : Women – 3%, Men – 33%). 46% of ST women (National – 40%, Rural – 43%) experience some form of spousal violence (Physical, emotional or sexual). The ST figures are higher than the national and rural figures.

<sup>39</sup> NFHS 3 National report, Vol. 1. – Source of Health care- pages 437,438.

<sup>40</sup> Ibid - pages 429,430,431,509

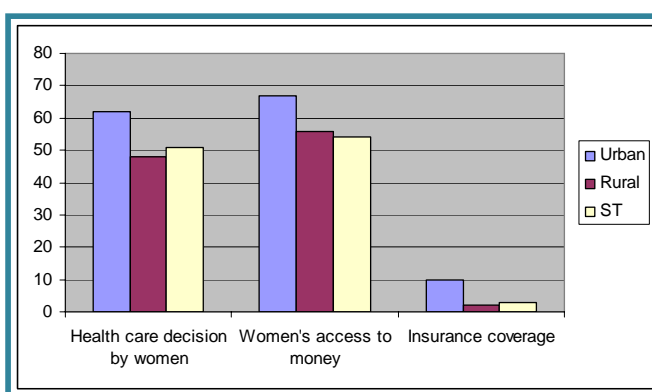
### 5.4.3.2. Findings from the field visit:

We found that the PHC Medical Officers and the health workers were found lacking in awareness of the magnitude of these problems. No specific focus on these issues is being given in general.

### 5.4.4. Health care decision by women, Women's Access to money in the family and Percentage of households covered by any type of health insurance:

#### Desk review findings<sup>41</sup>:

In the ST, 50% of women take decisions about their own health care, 53% have access to money that they can decide how to use and 46% have heard of micro credit schemes. Only 2.6% of the ST families have any type of health related insurance.



Among the ST, the three most common preferred insurance schemes are Employee State Insurance Scheme (ESIS), Central Government Health Scheme (CGHS) and Privately purchased commercial health insurance. The community health insurance programmes are least preferred amongst the ST. The reasons for this are not known. The extent of utilization of governmental schemes like Yashaswini in the ST is not available from the report. 12% of the ST depends on the reimbursement of medical expenses from the employer.

### 5.4.5. Concerns regarding other factors that contribute to the Health status:

1. Only for 40% of the rural and Lowest two wealth index categories, to which most of the ST population belong, Government facilities are the source of health care. The remaining 60% seek private providers. The main reasons given for not seeking care in the government health facilities are poor quality of care (51%), lack of a nearby facility (45%), and long waiting times (32%).
2. 26% of women and 71% of Men use tobacco in some form or the other and 14% of

<sup>41</sup> NFHS 3 National report, Vol 1. – pages 434,435,464,467,469

women and 50% of men use alcohol in ST. 46% of ST women experience some form of spousal violence (Physical, emotional or sexual). These figures are higher than the national and rural figures. During the field visit, we found that the PHC Medical Officers and the health workers are lacking in awareness of the magnitude of these problems. No specific focus on these issues is being given in general.

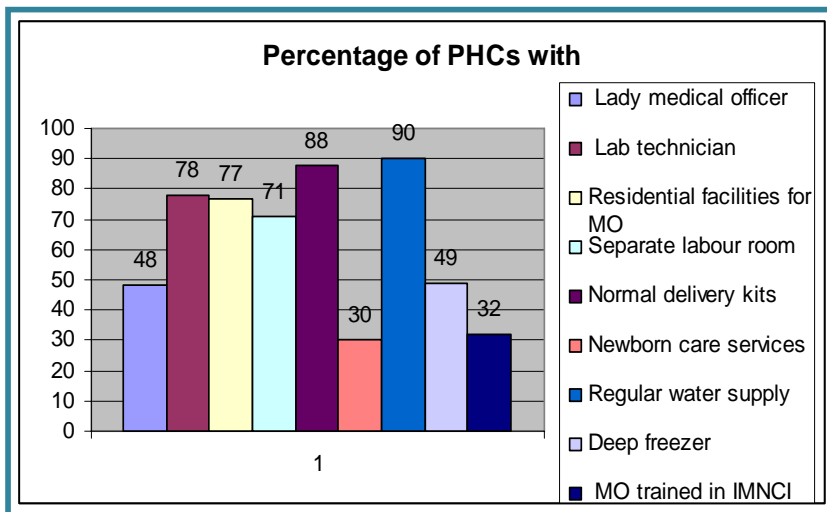
3. Only 2.6% of the ST families have any type of health related insurance.

### 5.5. Health Facility Indicators:

#### 5.5.1. Primary Health Centre:

##### 5.5.1.1. Desk review findings:

The findings from the fact sheets of the DLHS 3 (2007/08) on selected facilities in 141 PHCs in the 8 tribal populated districts selected for our study are shown in this chart. (The fact sheets for Maharashtra are not available)



Concrete Service Guarantees that NRHM is supposed to provide through PHC mechanism are<sup>42</sup>:

1. Skilled attendance at all Births
2. Full coverage of childhood diseases /health conditions
3. Full coverage of maternal diseases /health conditions
4. Full coverage for blindness due to refractive errors and low vision

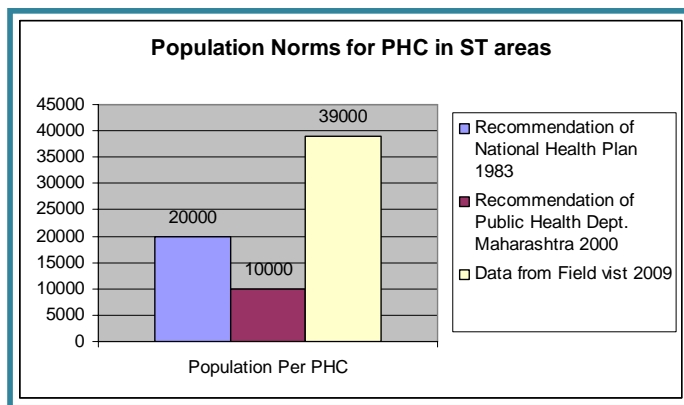
<sup>42</sup> NRHM Framework for Implementation 2005-2012, Annexure II, Ministry of Health and Family Welfare, Government of India Nirman Bhawan, New Delhi-110001

5. Full coverage for leprosy
6. Full coverage for tuberculosis
7. Full coverage for vector borne diseases
8. Full coverage for minor injuries / illness
9. Full coverage for inpatient treatment of childhood diseases / health conditions
10. Full coverage for inpatient treatment of maternal diseases / health conditions
11. Full coverage of Blindness, vector borne diseases, life style diseases, hypertension etc.
12. Full coverage for providing secondary care services at District Hospital.
13. Full coverage for meeting unmet needs and spacing and permanent family planning services.
14. Full coverage for RTI/STI and counseling for HIV – AIDS services for adolescents.
15. Health education and preventive health measures.

#### 5.5.1.2. Findings of the field visit:

We collected extensive information on the facilities of the 44 PHCs visited.

#### 1. Population Norms and accessibility:



Each PHC caters to a population of 17,000 to 65,000, the average being 40,000 spread over 59 villages and the average distance of the farthest village from the PHC is 24 km. The distance between the PHC and the nearest referral centre is 28 km. Nearly 18 percent of the villages do not have proper roads and 11 percent are not accessible during certain periods of the year. The National Health Plan (1983) proposed reorganization of PHCs on the basis of one PHC for every 30,000 rural population in the plains and one PHC for every 20,000 population in hilly, tribal and backward areas<sup>43</sup>. Population density in the country is not uniform. Therefore, it would make eminent sense to link the number not to the population

<sup>43</sup> Park's Text Book of Preventive and Social Medicine, 19<sup>th</sup> edition, Chapter 21, Health Care of the Community.

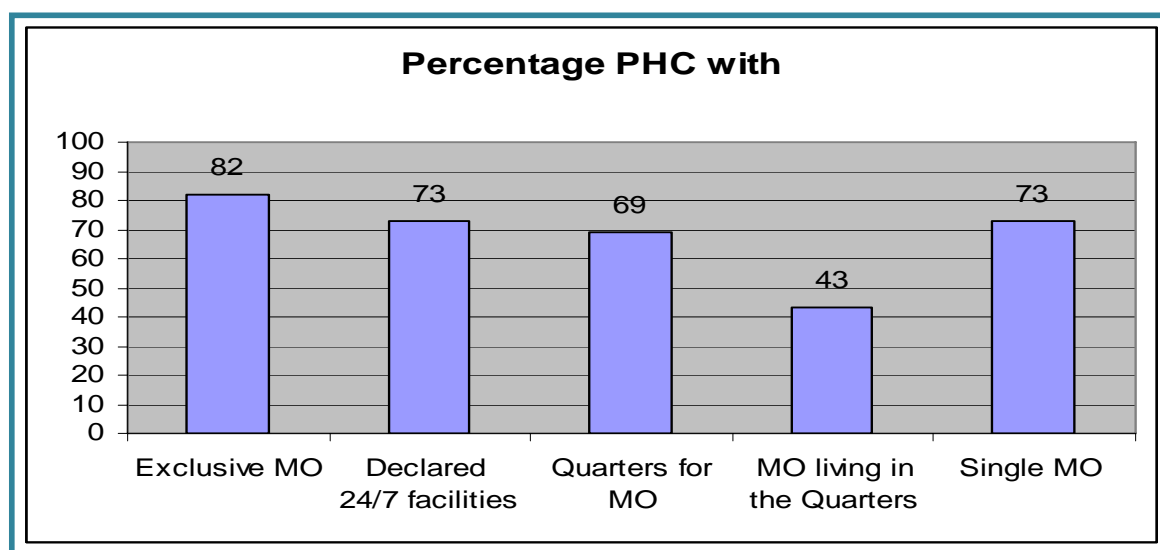
but to caseload and the distance of village / habitations<sup>44</sup>.

In the year 2000, The Public Health Department of Maharashtra, recorded that “a primary health centre caters to population within a radius of 20 to 25 kms and a sub centre caters to population within a radius of 8 to 10 kms in the Tribal areas, while these are only 12 to 15 kms and 4 to 6 kms respectively in the non tribal areas. It has, therefore, proposed a norm of one primary health centre for a population of 10000 within a radius of 10 to 12 kms and a sub centre for a population of 1000 within a radius of 5 kms.”<sup>45</sup>

In terms of population coverage and accessibility, the PHCs in the ST areas are overburdened and not easily accessible by all the villages under their care.

## 2. Human resource:

82% of the PHCs have exclusive MO. Though 73% of the PHCs claimed to be offering 24/7 services only in 43% of them were the medical officer staying on the campus after 4pm. 73% of the PHCs were single medical officer PHCs and hence they lacked back up support when the medical officers are on leave. The OPD is managed by paramedics in doctor’s absence as there is no back up medical support. On an average 20 % of the posts of paramedical staff (excluding ASHA) are vacant.



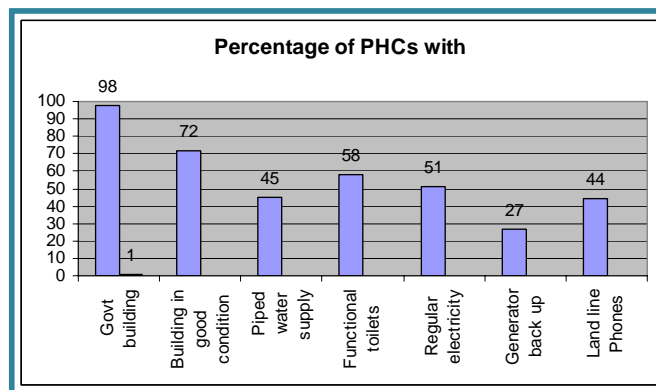
Only 58% of the medical officers had any **skill** development training in the last 2 years.

<sup>44</sup> Pages 56, 58 NRHM Framework for implementation, 2005-2012, MOHFW.

<sup>45</sup> Website of Government of Maharashtra.

### 3. Infrastructure:

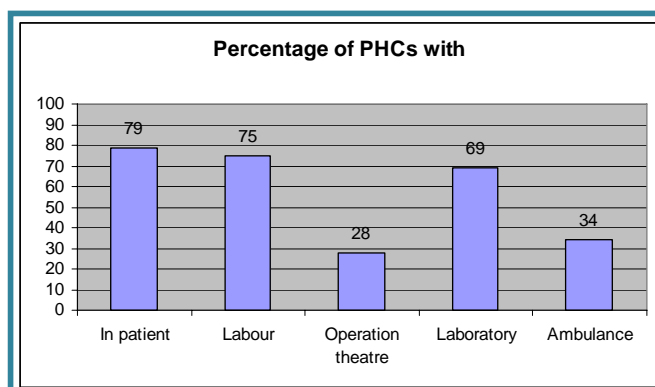
#### *OPD in a PHC*



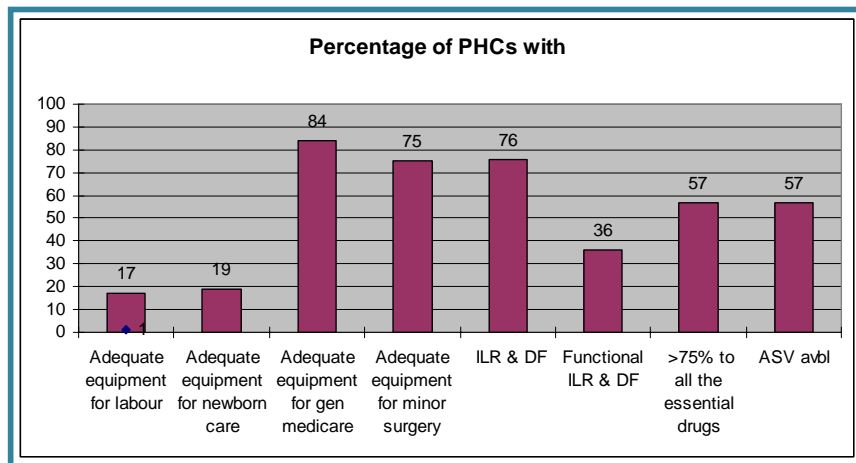
Though 98% of the PHCs were in government building, only 72% of them were in good condition. In some areas (Jharkhand) there was even paucity of PHCs. Each block had only one PHC. Some of the PHCs were in the process of transition or up gradation from PHC to CHC and hence there was confusion even among the medical officers as to the status of their own institution and their own job description. The up gradation process was not complete even 4 years after the implementation of NRHM. Piped water supply was available in 45% and functional toilets in 58% of the PHCs. 51% of the PHCs had regular electricity and 27% had generator back up. 44% of the PHCs had connectivity through land line phones. Some of the interior ST areas are not reachable by mobile phone facilities.

### 4. Facilities offered, equipments and supplies:

79% of the PHCs have inpatient facilities with an average of 5 beds each and 75% have labour rooms where labour is being conducted. However, only 17% had adequate facilities for conducting normal labour and 19% for newborn care. Minor Operation theatre is available in 28% of the PHCs and functional ambulance facilities in 34%.



Though clinical laboratory facilities are available in 69% of the PHCs, they had limitations in terms of range of basic investigations (one or more of the following tests are available - Haemoglobin estimation,



Urine albumin, sugar estimation, Urine pregnancy test, smear for AFB and Malaria parasite) and availability of full time laboratory technician. 76% of the PHCs had ILR and Deep freezer for vaccine storage yet only in 36% of them were they functional. Only 57% of the PHCs had more than 75% of the essential medicines including Anti snake venom. There was periodic shortage of supplies of medicines especially pediatric formulations in certain areas.

#### PHC without Medical Officer

#### 5. Skill development training:

Only 58% of the Medical Officers had any kind of skill development training in the previous two years.

#### 6. Cleanliness:

The general cleanliness of the PHC was good only in 5% of the PHCs. The waste disposal mechanisms in the PHCs are either burning or burial. None of the PHCs visited had the recommended waste segregation and disposal mechanisms in place.



**In general, during the field visit we found that the PHCs are not fully equipped to address the health needs in the tribal areas.**

7. Comparison of some of the basic services guaranteed by NRHM and the Field data:

Area	Service guarantee by NRHM	Field data
<b>Medical care</b>		
OPD service	4 hours morning and 2 hours in the afternoon	Community reports that the MO is not available in the afternoon hours in 43% of the PHCs. 18% of the PHCs do not have exclusive MO on a daily basis.
24 hour emergency services	All PHCs	Only in 43% of the PHCs do the MOs stay on the campus. 73% of the PHCs visited were single MO PHCs
Inpatient services	6 beds	Only 79% of the PHCs have inpatient facility with an average of 5 beds each
<b>Maternal Care</b>		
<i>Antenatal care</i>		
Early registration (I Trimester)	all pregnancies	Only 36% registration
Minimum of 4 ANC's	all pregnancies	Only 41% of the pregnancies get 3 or more ANC's
<i>Intranatal care</i>		
24 hour delivery services (normal and assisted)	All PHCs	75% PHCs have labour rooms, but only 17% have adequate equipment for labour
<i>Postnatal care</i>		
2 PNC's one within 48 hours and the second within 7 days	For all deliveries	PNC given for all institutional deliveries but not home deliveries.
<b>Child care</b>		
<i>Newborn care</i>	All PHCs to have basic newborn care facilities	Only 19% have facilities for newborn care
<i>Child care</i>	All PHCs to have Care based on IMNCI	Only 20% of the MO had undergone training in IMNCI

<b>Referral services</b>	All PHCs	only 34% of the PHCs have functional ambulance
<b>Basic Lab services</b>	i. Routine urine, stool and blood tests	One or more of the following tests are available in 69% of the PHCs - Haemoglobin estimation,, Urine albumin, sugar estimation, Urine pregnancy test, smear for AFB and Malarial parasite.
	ii. Blood grouping,	
	iii. Bleeding time, clotting time,	
	iv. Diagnosis of RTI/ STDs with wet mounting, Grams stain etc.	
	v. Sputum testing for tuberculosis	
	vi. Blood smear examination for malarial parasite	
	vii. Rapid tests for pregnancy/ malaria	
	viii. RPR test for Syphilis/YAWS	

### 5.5.1.3. Rays of Hope:

*The efficacy of a PHC depends to a large extent on the commitment of the medical officer. We saw two instances of the effect of such a commitment during our visit.*

*Wadana bazaar PHC in Ralegaon, Yawatmal run by Dr. B.M. Satamwad is one of the best PHCs in terms of infrastructure, human resource and patient friendly approach. The satisfaction of the villagers about the services of the PHC and the Medical officer is evidenced by the community participation in the form of donation of equipments like nebulizers and fans. The MO is utilizing the services of the class 4 workers in other areas. One of them is also the driver for the ambulance. This instills a sense of pride and empowerment in them.*

**Newborn care facility in PHC**





**Dr. Amit Dalal in the OPD**

Dr. Amit Dalal in Bori of Jhabua district has transformed this PHC which was housed in a small subcenter building 8 years ago into a busy PHC which is now in the process of up gradation to a BEMOC PHC (Basic Emergency Medical and Obstetric Care). It has a host of facilities for various investigations. During our visit he was conducting successfully delivery of twins in this remote area.

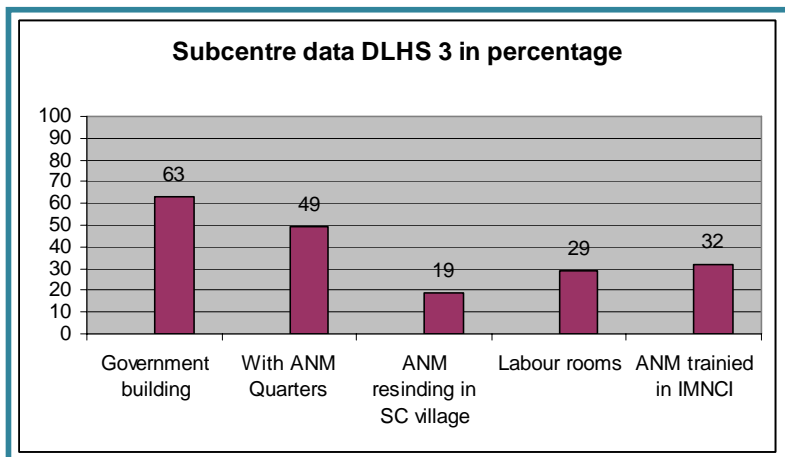
He motivates his team of Paramedical workers by passing over to them many accolades and appreciations that come to him.

**5.5.2. Subcenters:**

**5.5.2.1. Desk review findings:**

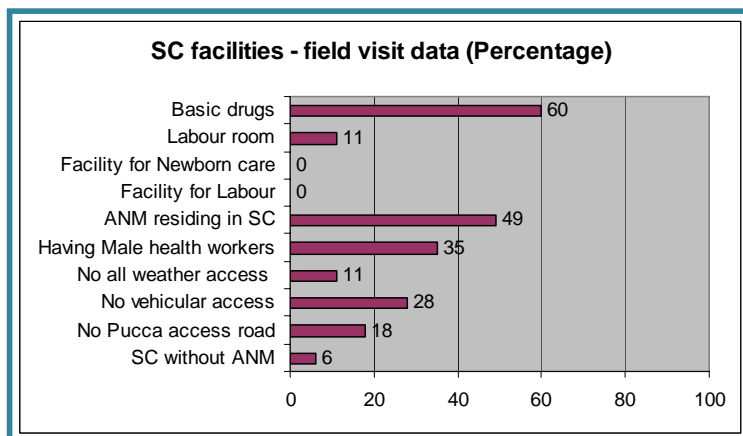
As per the DLHS 3 (2007/08) report, which surveyed 297 subcentres in the 8 tribal populated districts (the report for Maharashtra are not available) selected for our study only 63% of the subcentres had their own building provided by

the government. Residential quarters for the ANM were available in 49% and only 19% of the ANMs resided in the quarters or in the sub centre village. 1/3<sup>rd</sup> of the subcentres had labour rooms. 1 in 3 ANMs had undergone IMNCI training.



**5.5.2.2. The field visit findings:**

We visited 44 subcentres. On an average each PHC has 11 subcenters ranging from 5 to 18 per PHC each having a population of about 4000 spread over about 7 scattered hamlets. As per NRHM, the Sub-Centres are currently provided on the

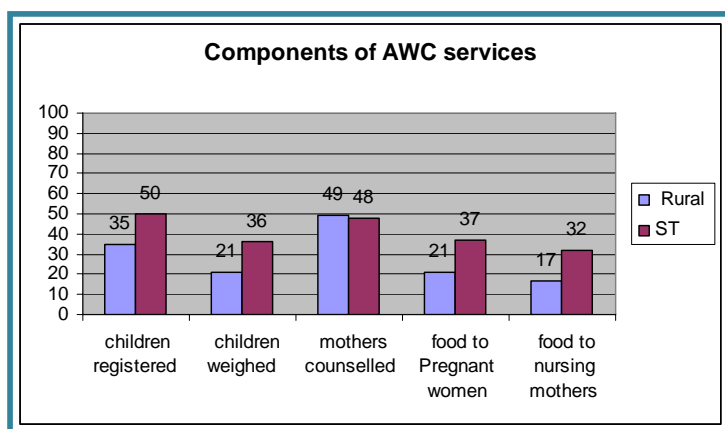


population norm of 1 per 5000 population in general areas and 1 per 3000 population in tribal areas.<sup>46</sup> 28% of the subcentres have no vehicular access, 18% have no proper access road and 11% have no all weather access. 6% had no ANM and 65% have no male health worker. 49% of the ANMs claimed that they live in the subcentre village. Though 11% of the subcentres had designated rooms for conducting normal labor, they were not conducive for it. None of the subcentres had facilities for newborn resuscitation. Basic drugs were available in only 60% of them.

### 5.5.3. Anganwadi Centre and services:

#### 5.5.3.1. Desk review findings<sup>47</sup>:

Supplementary nutrition, Non-formal pre-school education, Immunization, Health Check-up, Referral services and Health Education are the 6 services to be provided by the ICDS under which comes the Anganwadi programme. Of these, three services, namely immunization, health check-up and referral are delivered through public health infrastructure viz. Subcentres, Primary and Community Health Centers under the Ministry of Health & Family Welfare.

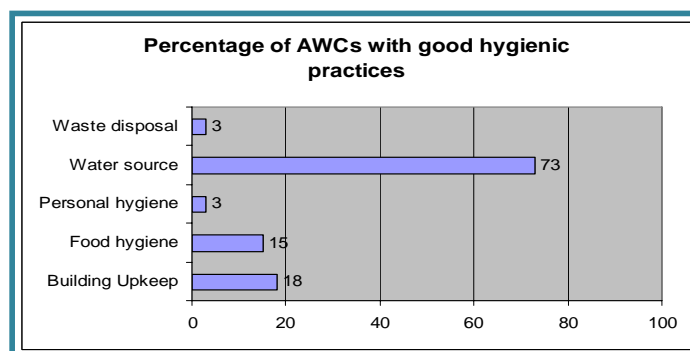


Though the percentage of utilization of the AWCs in ST are higher than the rural figures, in absolute terms only 50% of children are registered and 38% among them are weighed regularly. 48% of the mothers whose children are weighed receive some form of nutrition related counseling. Thus

the benefit of growth monitoring goes only to a very small fraction of ST children.

#### 5.5.3.2. Field review findings:

We visited 34 Anganwadis to study the hygiene and general upkeep of the centres. The overall hygiene of the centres and the



<sup>46</sup> Pages 56, 58 NRHM Framework for implementation, 2005-2012, MOHFW.

<sup>47</sup> NFHS 3 National and State level reports; <http://wcd.nic.in/icds.htm>

children was very poor in the centres visited. In some states there were no buildings for the centre and the worker managed by cooking in her home. None of the AWCs had a toilet. The quality of the food grains that were stocked was poor. Some of the centres had no weighing scale. In areas prone for terrorist / Maoist attacks, in Jharkhand we were told that 1/3<sup>rd</sup> of the budget of the centre goes to the Maoist supervisor – Mapahadia people.

In one of the Anganwadi centres visited (Mapahadia, Jharkhand), the worker was just giving one spoon of food to the children nearby.

Though the various evaluation reports of the ICDS schemes<sup>48</sup> give encouraging accounts of its positive impact in general across the country, specific data for the ST are not available. During the field visit, we got the views of both the beneficiaries and the providers. The community felt improving the AWC services, provision of 2 meals per day at 11.30 am and 1.30 pm (in Jharkhand, Maharashtra and Madhya Pradesh) improving the cleanliness of the AWC, regularizing the food / provision supply to the centres and periodic health check up of children are necessary if the programme has to be effective. Many of them said that the AWCs do not function regularly in their villages.

The providers had their problems. In ST areas there is no one in the house to bring the child to the AWC regularly as the parents go for work. In addition, too much of documentation work, people not having faith in anganwadi services, poor infrastructure at anganwadi, irregular supply of provisions to the centres, difficulty in transporting the provision to the centres as they are not paid separately for this, poor salary, irregular salary disbursements (they get salaries once in 3 to 4 months), non health related work like collection of Recurring deposit amount from the village (in some areas) were mentioned as their difficulties in effectively functioning. These difficulties decrease their morale and enthusiasm in the work. Though “the ICDS is perhaps one of the better-conceived programmes, there is a huge gap between what is expected of the programme and the ground situation.”<sup>49</sup>

“The ICDS Scheme envisages the Anganwadi Workers (AWWs) and Helpers(AWHs) as "honorary workers" from the local community who come forward to render their services, on part-time basis, in the area of child care and development. Anganwadi Workers & Helpers are the grass roots functionaries to implement the Integrated Child Development Services (ICDS) Scheme.”<sup>50</sup> Taking into view the important function of the programme and

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<sup>48</sup> <http://www.wcd.nic.in/icds.htm> Integrated Child Development Services (ICDS) Scheme: Evaluation of ICDS Scheme:

<sup>49</sup> <http://www.india-seminar.com/2005/546/546%20vimla%20ramachandran.htm#top>

<sup>50</sup> <http://www.wcd.nic.in/icds.htm> Integrated Child Development Services (ICDS) Scheme: Status of Anganwadi Workers

the role of the field level providers of the programme, there is a need to reconsider the 'Honorary' status of the AWW and helpers.

The state level officials in charge of the ICDS programme seem to be aware of the challenges facing the programme. In Maharashtra innovative collaborations are being experimented to improve the nutrition aspect of the ICDS. (Food programme – Taj group of hotels with a NGO called Bhavishya Alliance are working through Self Help Groups in ST areas of Nandarbar for diversifying and supplementing food at the AWC. This is a pilot project and if found successful, will be implemented in other ST areas).

#### **5.5.4. Community Health Centres:**

The selected materials for desk review, namely NFHS and DLHS did not have details of the status of the CHCs in the selected districts for desk review.

The NRHM document states that the following services are guaranteed by all the CHCs<sup>51</sup>:

1. Care of routine and emergency cases in surgery.
2. Care of routine and emergency cases in medicine.
3. 24-hour delivery services including normal and assisted deliveries.
4. Essential and Emergency Obstetric Care including surgical interventions like Caesarean Sections and other medical interventions.
5. Full range of family planning services including Laparoscopic Services.
6. Safe Abortion Services.
7. Newborn Care.
8. Routine and Emergency Care of sick children.
9. All the National Health Programmes.
10. Blood Storage Facility.
11. Essential Laboratory Services.
12. Referral (Transport) Services.

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and Helpers

<sup>51</sup> NRHM Framework for Implementation 2005-2012, Annexure II, Ministry of Health and Family Welfare, Government of India  
Nirman Bhawan, New Delhi-110001

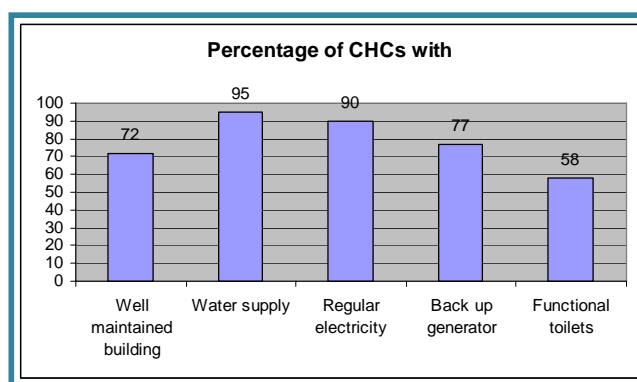
### 5.5.4.1. Field review findings:

#### 1. Population norms:

We visited 17 CHCs each one serving an average population of 1,34,250, spread over about 100 villages and a referral centre for 5 PHCs. 75% to 80% of the patient load is from the ST. The CHCs are currently provided on the population norm of 1 per 1,20,000 population in general areas and 1 per 80,000 population in tribal / desert areas<sup>52</sup>. In the ST areas visited, the population served by the CHC is much more than the prescribed norms.

#### 2. Infrastructure:

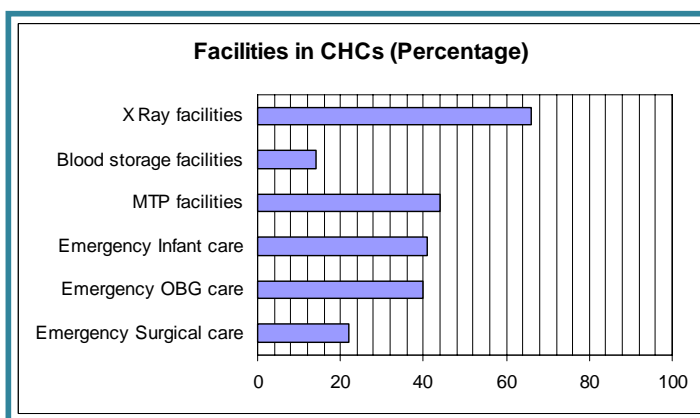
Only 72% of the CMC buildings were maintained well and functional toilets were available only in 58% of them. Some of the other infrastructural facilities are shown in the chart.



#### 3. Facilities:

Some of the crucial facilities which contribute to adequate health care during emergencies were found to be wanting.

Obstetricians, Surgeons and Anaesthetists were available only in 44%, 30% and 20% of the CHCs respectively. 44% of the CHCs had



facilities for Medical Termination of Pregnancy and 14% had blood storage facilities. Only about 40% of the CHCs were equipped to address the Obstetric and infant related emergencies and 22% Surgical emergencies due both to poor infrastructure and non availability of skilled human resource. Functional X ray facilities were available in 66% and

<sup>52</sup> Page 60, NRHM Framework for implementation, 2005-2012, MOHFW.

functional Ambulance facilities in 85% of the CHCs.

#### **5.5.5. Concerns regarding Health facilities:**

##### ***5.5.5.1. Primary Health Centres:***

1. Each PHC caters to a population of 17,000 to 65,000, the average being 40,000 spread over 59 villages and the average distance of the farthest village from the PHC is 24 km. The distance between the PHC and the nearest referral centre is 28 km. Nearly 18 percent of the villages do not have proper roads and 11 percent are not accessible during certain periods of the year. In terms of population coverage and accessibility, the PHCs in these ST areas are overburdened and not easily accessible by all the villages under their care.
2. Only in 43% of the PHCs were the medical officers staying on the campus. 73% of the PHCs are single MO PHCs. There is no back up support when the medical officers are on leave in PHCs with single Medical Officer. On an average 20 % of the posts of paramedical staff (excluding ASHA) are vacant.
3. Only 72% of the PHCs were in good condition. Some of the PHCs are still in the process of transition or up gradation from PHC to CHC and hence there was confusion even among the medical officers as to the status of their own institution and their own job description. The up gradation process was not complete even 4 years after the implementation of NRHM.
4. Piped water supply was available in 45% and functional toilets in 58% of the PHCs. 51% of the PHCs had regular electricity and 27% had generator back up. 44% of the PHCs had connectivity through land line phones. Some of the interior ST areas are not reachable even by mobile phone facilities. 76% of the PHCs had ILR and Deep freezer for vaccine storage yet only in 36% of them were they functional. 57% of the PHCs had more than 75% of the essential medicines including Anti snake venom. Minor Operation theatre is available in 28% of the PHCs and functional ambulance facilities in 34%.
5. Though clinical laboratory facilities are available in 69% of the PHCs, they had limitations in terms of range of basic investigations (one or more of the following tests are available - Haemoglobin estimation,, Urine albumin, sugar estimation, Urine pregnancy test, smear for AFB and Malarial parasite) and availability of full time

laboratory technician.

6. 75% of the PHCs have labour rooms where labour is being conducted. However, only 17% have adequate facilities for conducting normal labour and 19% for newborn care. **We feel that just bringing the pregnant women to the institution for delivery does not address the basic need for appropriate and optimal care during delivery as the facilities are lacking in resources. It seems that there is not much difference between home and hospital deliveries in terms of quality of care.**
7. The general cleanliness of the PHC was good only in 5% of the PHCs. The waste disposal mechanisms in the PHCs are either burning or burial. None of the PHCs visited had the recommended waste segregation and disposal mechanisms in place.
8. Only 58% of the Medical Officers had any kind of skill development training in the previous two years.

**In general, during the field visit we found that the PHCs are not fully equipped to address the health needs in the tribal areas.**

#### **5.5.5.2. Subcentres:**

1. On an average each PHC has 11 subcenters ranging from 5 to 18 per PHC each having a population of about 4000 spread over about 7 scattered hamlets. As per NRHM, the Sub-Centres are currently provided on the population norm of 1 per 5000 population in general areas and 1 per 3000 population in tribal areas.
2. 28% of the subcentres have no vehicular access, 18% have no proper access road and 11% have no all weather access. 6% had no ANM and 65% have no male health worker. 49% of the ANMs claimed that they live in the subcentre village. Though 11% of the subcentres had designated rooms for conducting normal labor, they were not conducive for it. None of the subcentres had facilities for newborn resuscitation. Basic drugs were available in only 60% of them.

#### **5.5.5.3. Anganwadi centres:**

1. Though the percentage of utilization of the AWCs in ST is higher than the rural figures, in absolute terms only 50% of children are registered and 38% among them are weighed regularly for monitoring of their nutritional status. 48% of the mothers

whose children are weighed receive some form of nutrition related counseling<sup>53</sup>. Thus the benefit of growth monitoring goes only to a very small fraction of ST children.

2. The overall hygiene of the centres and the children was very poor in the centres visited. In some states there were no buildings for the centre and the worker managed by cooking in her home. None of the AWCs had a toilet. The quality of the food grains that were stocked was poor. Many of the centres had no weighing scale. In areas prone for terrorist / Maoist attacks,(Jharkhand) we were told that 1/3<sup>rd</sup> of the budget of the centre goes to the Maoist supervisor – Mapahadia people.
3. The challenges facing Anganwadi workers include too much of documentation work, people not having faith in anganwadi services, poor infrastructure at anganwadi, irregular supply of provisions to the centres, difficulty in transporting the provision to the centres as they are not paid separately for this. The present function of the AWW as a part time honorary worker is a hindrance to their full involvement with the program. Their salary/honorarium is poor and its disbursements are irregular. They are also given periodically certain non health related jobs. These difficulties decrease their morale and enthusiasm in the work.
4. The Anganwadi is more a feeding center and the component of preschool education of the children is often lacking.
5. The ST community (in Jharkhand, Madhya Pradesh and Maharashtra) feels that food must be provided twice a day.

#### **5.5.5.4. Community Health Centres:**

1. Each CHC serves a population of 1,34,250, spread over 100 villages and is a referral centre for 5 PHCs. The CHCs are currently provided on the population norm of 1 per 1,20,000 population in general areas and 1 per 80,000 population in tribal / desert areas.
2. Only 72% of the CMC buildings were maintained well and functional toilets were available only in 58% of them.

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<sup>53</sup> NFHS 3 National and state level reports

3. Some of the crucial facilities which contribute to adequate health care during emergencies were found to be wanting. Obstetricians, Surgeons and Anaesthetists were available only in 44%, 30% and 20% of them respectively. 44% of the CHCs had facilities for Medical Termination of Pregnancy and 14% had blood storage facilities. Only around 40% of the CHCs were equipped to address the Obstetric and infant related emergencies and 22% Surgical emergencies due both to poor infrastructure and non availability of skilled human resource. Functional X ray facilities were available in 66% and functional Ambulance facilities in 85% of the CHCs.

#### **5.6. Impact of NRHM on the health situation in ST:**

Though an in depth analysis of the impact is beyond the scope of the present study, we will touch upon certain aspects that came under our purview.

##### **5.6.1. Positive aspects :**

1. **Infrastructural facilities** like building, residential quarters for the staff, water supply, and stand by power supply equipments are in the process of **being provided**.
2. The ASHA scheme and the scheme to mainstream AYUSH practitioners have the **potential to increase the man power**. As a consequence of this and the incentivization schemes, the utilization of maternal health services like Ante natal care, Institutional deliveries and Post natal care and child health services like immunization have been reported to have increased.
3. There is **availability of funds** and scope for decentralized expenditure for health care at the PHC level.
4. There is scope for **community participation** in health care decision making at the village level. This has the potential to improve the quality of both routine and emergency care, thus increasing the faith of the community in the PHC services.

##### **5.6.2. Areas of concern :**

###### **5.6.2.1. General:**

1. Just providing the infrastructural facilities alone cannot bring about the desired change

unless there is adequate medical man power. One of the biggest challenges is to meet the human resource requirement for the services to be delivered. There is a deficit of staff across the board, specialist doctors, male multipurpose workers, and laboratory technicians<sup>54</sup>.

2. As the clinical responsibilities of the medical officer have increased with increasing hospital deliveries and case loads, there is a felt need to have more human resource for clerical and supervision work related to building construction.
3. It is felt that many contract workers are not fully involved with the work as their salary is not on par with the regular service people. As many of the support staff is recruited on contract basis, they are not given residential quarters and this needs to be addressed.
4. The external evaluation and monitoring mechanism for NRHM activities need strengthening.
5. Many of the positive aspects like the increase in utilization of services are felt to be mainly due to incentive schemes. There is a fear that things may deteriorate if the schemes are stopped in later years.

#### **5.6.2.2. Fund flow:**

1. It was found during the field visit that the PHC and the CHC medical officers were not adequately oriented about the functioning of NRHM and management of its fund flow at different levels.
2. The funds are not released in time and they reach the PHCs towards the end of the financial year putting the medical officers under pressure to utilize them at the last moment. The cheques that come are not accompanied by instructions clearly mentioning the purpose for which they are released (Annual Maintenance Grant, Untied Fund, Rogi Kalyana Samiti). This causes confusion and hesitation in using them.
3. Some of the MOs feel that there is a need for more transparency about the funds and the flow as they had valid reasons to feel that there is corruption at or below the district

level for the release of funds.

#### ***5.6.2.3. Collaborations and consultations with the Tribal Welfare Department:***

The Tribal welfare directorate seems to have restricted role in the project planning, implementation and monitoring of the activities of NRHM. Its role in the health of the ST does not seem to go beyond canalizing of the funds received from the government under various schemes to the health department.

#### ***5.6.2.4. The study findings in relation to the Goals and strategies of NRHM:***

The goals of NRHM to be achieved by 2012 are:

1. Reduction in Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR)
2. Universal access to public health services such as Women's health, child health, water, sanitation & hygiene, immunization, and Nutrition.
3. Prevention and control of communicable and non-communicable diseases, including locally endemic diseases
4. Access to integrated comprehensive primary healthcare
5. Population stabilization, gender and demographic balance.
6. Revitalize local health traditions and mainstream AYUSH
7. Promotion of healthy life styles.

The important strategies of NRHM to achieve these goals are:

1. Strengthening Subcentres
2. Strengthening of PHCs
3. Strengthening CHCs for first referral care
4. Strengthening disease control programmes
5. Technical support
6. Funding Aspects

The IMR and MMR depend upon many factors like safe water, sanitation, poverty eradication, nutrition (especially, nutrition of girls and young mothers and children), education, housing, connectivity and transport. Malnutrition is a very important factor in mortality.

At best NRHM is trying to improve the infrastructure for basic health care and increase the human resource on the one hand and increase the attendance of the beneficiaries in the health care institution (however ill equipped at present) by incentivization schemes on the other. This thrust in primary care alone will be able to cure diseases but the patient will go back to the same physical and socio economic environment which in the first place has been the cause and the breeding ground for the ills in health. At present, the demand for health care is based on the incentives received rather than on the felt need for better health and health care in the community. The vital aspect of community participation and ownership in the process of demand generation for optimal health care can only come about by changes in beneficiaries' perception, behaviour and attitude to health.

Though there are national programs for the communicable diseases, the main aspect of prevention depends upon the improvement in sanitary conditions and convergence of other inputs at the village level. The need for convergence at the higher levels is a prerequisite for effective convergence at the community. There is a need to identify the indicators that are to be tracked to monitor the convergence of the inputs. An integrated approach has to be undertaken for control of the communicable diseases if this goal has to be realized. During the visit we found that the MOs have very limited focus on and facility for addressing non communicable illnesses in the ST areas.

The Mission proposes to Revitalize local health traditions and mainstream AYUSH (Ayurveda, Yoga, Unani, Sidda and Homeopathy) by the following strategies:

1. AYUSH medications shall be included in the Drug Kit provided at village levels to ASHA.
2. The additional supply of generic drugs for common ailments at Subcentre/ PHC/CHC levels under the Mission shall also include AYUSH formulations.
3. At the CHC level, two rooms shall be provided for AYUSH practitioner and pharmacist under the Indian Public Health System (IPHS) model.
4. Single doctor PHCs shall be upgraded to two doctor PHCs by mainstreaming AYUSH practitioner at that level.

This aspect is still vague as it has not been clearly defined what exactly "Mainstreaming" AYUSH infrastructure means. In the field visit we came across a few AYUSH practitioners who were using regular allopathic medications. We did not come across any process of revitalizing local health traditions. It is unclear if the drug kit that is planned to be provided at village levels to the ASHA will contain all the medicines from the different systems. We

did not come across any dedicated AYUSH facility in any of the CHCs visited in the ST areas. One gets a feeling that by the present proposed process of mainstreaming the AYUSH systems there is a possibility of diluting the rich health traditions of our country. The process of documentation of the various Health traditions in the ST areas does not seem to be an integral part of the revitalization process.

Promotion of healthy life styles is a sustained attempt at behavior change in the community and we did not see any initiative in this direction during our field visits.

Considering the field realities, we feel that more focused efforts are necessary in the ST areas if the goals of the Mission are to be reached by 2012, as the needs go beyond medical inputs.

## **6. Important Findings regarding the health of the ST (Consolidated):**

### **6.1. General:**

STs constituting 8.2% of the total population of the country contribute to 17.5 % of the rural poor. There is paucity of data pertaining to them and whatever is available is scanty. There seems to be no systematic mechanism to capture various disaggregate health related data for the ST population. All available studies and surveys leave one in no doubt that all the health indicators, especially related to health status, accessibility, reach and health delivery, are very much below the national average and in most instances lower than the rural figures.

### **6.2. Under Five Child Health:**

1. The Crude Birth Rates in the ST are not available from the desk review materials.
2. The desk review shows that mortalities between 1 month to 5 years is 30 at the National level, 41 in the Rural areas and 64 in the ST areas per 1000 live births. The number of children dying in this age group in the ST areas is more than twice the national average. It is higher than the rural figures. The medical officers and other health providers interviewed during the field visit were found lacking in awareness of the extent of the mortality in different age groups of children in their area.
3. The health facilities, SC, PHC and CHC are inadequately equipped in terms of infrastructure, supplies, man power and skills to address illnesses which contribute to

the morbidity and mortality in children. In addition to this, availability, accessibility and affordability issues come in the way of providing quality care to sick children.

4. The percentage of children who receive appropriate treatment for important childhood illnesses is low across the country as well as in the ST areas. In the ST, only 1 in 8 children get appropriate treatment for ARI (13%) and Malaria (12%) and 1 in 3 for Diarrhea (29%). Only 60% of ST women are aware of the importance of Oral Rehydration Solutions in diarrhoea.

5. All the parameters for under nutrition are higher in the ST than the National and the rural figures. 57% of ST children are Underweight (Rural - 50% and National - 39%), 55% stunted (Rural - 50% and National 45%), 29% wasted (Rural - 25% and National 19%) and 78% anemic (Rural - 71% and National - 67%). The causes for the poor nutritional status are lack of access to appropriate quantity and quality of food due to poverty and reasons which go beyond the health sector which can only provide a necessary infrastructure and ensure its efficient functioning. In the nutritional interventions of the AWC, the nutritional needs of the children in the crucial age bracket (6months to 2 years) are not being addressed although the scheme (ICDS) covers the age group 0 to 3 years also. Only for 13% of the children are all the three recommendations of IYCF practice (recommended by WHO) followed.

6. Among the ST children in the selected states, 32% (1 in 3) received full primary immunization (National - 48%, Rural - 43%) and 12% (1 in 8) no immunization (National - 5%, Rural - 7%) as per the data of 2005/06 (NFHS 3). The ST figures are lower than the national and rural figures. There has been no appreciable improvement in trend between 1998/99 and 2005/06. The inadequate coverage of immunization is related to difficulties in availability, procurement, storage, maintenance of cold chain of vaccines and accessibility of the target population. The ST figures of immunization coverage are lower than the rural figures. Only 15% of the ST children received Vitamin A in the previous 6 months and this is less than in the rural and national figures.

### **6.3. Maternal Health in ST:**

1. Only 36% of the pregnant woman are registered for ANC in the I trimester, 41% receive mandatory 3 ANC and 28% do not have any ANC. 63% of the pregnant women receive IFA tablets but only 21% of them actually consume them for the mandatory 100 days. Among those registered for ANC, 40 to 64 % receive varying individual basic

important components of the ANC. The percentage of women who receive all the basic components is not available from the reports. Only 32% of the pregnant women are told where to go if they experienced pregnancy related complications and 11 to 15 % of the pregnant women are given information on specific pregnancy complications. The important aspect of delivery preparedness and where to go if there are complications are not discussed with all the women.

2. Only 1 in 5 deliveries in ST is institutional deliveries and 1 in 4 is assisted by health personnel in 2005 - 2006. In spite of the incentive schemes, there are difficulties in promotion of institutional deliveries. Although institutional deliveries in ST areas are reported to have increased considerably after the initiation of NRHM from the low level of 20%, the issue is still a matter of concern. The deliveries take place mainly in the PHCs or the FRU and not in the Sub centres.

3. The infrastructural facilities, medical and paramedical human resources have not improved much. We feel that just bringing the pregnant women to the institution for delivery does not address the basic need for appropriate and optimal care during delivery as the facilities are lacking in resources. It seems that there is not much difference between home and hospital deliveries in terms of quality of care.

4. On an average, 1 in 4 women gets PNC within 48 hours of delivery. The health staffs are able to give PNC within 48 hours for only institutional deliveries and not for all home deliveries. In Orissa in the ST districts of Koraput and Mayurbanj, the DLHS 3 (2007/08) report states that the PNC within 48 hours of delivery is 100% and 95.7% respectively, though the percentage of institutional deliveries is only 11.6% and 40.3%. It is difficult to take the claim of 100% PNC. It is possible that the claim pertains to institutional deliveries only.

5. Figures for maternal mortality are not available in the reports studied (NFHS and DLHS). The medical officers are of the opinion that maternal mortality has reduced and that they tend to occur in home deliveries. Sepsis, post partal hemorrhage and anemia continue to be the commonest delivery related complications. Yet, the PHC or the FRU is ill equipped to deal with such events. As mentioned earlier, only 40% of the FRU can manage the obstetric emergencies, only 14% have blood storage facilities and 53% have facilities for Medical Termination of Pregnancy. Apart from mortality, the magnitude of the morbidity (so called near miss events) related to child birth is not known. The importance of maternal morbidity goes beyond the mother and affects the newborn as

well. Status of unsafe abortions in the ST areas has not been recorded.

6. The other indicators like Total Fertility Rate, Birth order of >4, and Teenage pregnancy in ST are higher than the National average. TFR : ST - 3.14, National - 2.5, Rural - 2.77; Birth order >4: ST - 33.4, National - 22.2, Rural - 24.2. Teenage pregnancy : ST - 22.5, National - 19.9, Rural - 20.7. In Karnataka, the TFR in ST has increased from 2.38 to 2.53 and the birth order of >4 from 18 to 24, while the decadal growth rate for the ST in Dakshin Kannada has shown a negative growth of 2.9%<sup>55</sup>. This is a cause for concern and it needs to be studied further. Every 4<sup>th</sup> pregnancy in the ST areas is a teenage pregnancy, yet, neither the medical officers nor the ANMs were aware of the magnitude of teenage pregnancies in ST.

7. The total unmet need for FP in the ST is 25% for the selected states. It is 13% at the national level and 14%% for the rural population. Medical Termination of Pregnancy services were available in only 53% of the CHCs visited.

#### **6.4. Adult Health:**

1. 41% of ST men (National - 34%; Rural - 38%) and 47% of ST women (National - 36%; Rural - 41%) are undernourished with the BMI of <18.5. 40% of ST men (National - 25%; Rural - 28%) and 69% of ST women (National - 55%; Rural 57%) are anemic. The nutrition of adolescent girls, pregnant and lactating women bears a direct relationship with the nutrition of the child. The AWC does not adequately address this section.
2. Disaggregate figures for the prevalence of tuberculosis for the state are not available. The awareness about tuberculosis and DOTS in ST is 70% and 60% respectively. Though cumulative figures for the ST districts across the nation show that the targets for RNTCP have been reached as per the annual report for 2008, during the field visit, it was learnt the health functionaries faced challenges in case detection and case holding. With these problems, it is difficult to understand how the targets for RNTCP have been reached in the ST districts.
3. Disaggregate figures for the ST in the areas of Leprosy, Kala Azar and Malaria are not available.
4. Prevalence of HIV infection in the ST is not available. Awareness indicators for the ST show that 8% of women and 20% of men have comprehensive knowledge about HIV. Specific measures to address this problem have not been implemented at the state levels except in Maharashtra and Karnataka. Though HIV screening in pregnant women is

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<sup>55</sup> Human development Report, 2005, Chapter 10

recommended in the country there are no facilities for screening in three of the states visited. ICTC facilities are not easily available in the PHCs or FRUs and people need to go the District hospitals for these services.

5. There is low awareness amongst the PHC MOs about the prevalence of genetic diseases in ST. At the PHC level the resources are inadequate to address the non communicable diseases and hence the patients have to go to the FRU or the district hospital for diagnosis and treatment.

#### **6.5. Other factors that contribute to the Health status:**

1. Only for 40% of the rural and lowest two wealth index categories, to which most of the ST population belongs, Government facilities are the source of health care. The remaining 60% seek private providers. The main reasons given for not seeking care in the government health facilities are poor quality of care (51%), lack of a nearby facility (45%), and long waiting times (32%).
2. 26% of women and 71% of Men use tobacco in some form or the other and 14% of women and 50% of men use alcohol in ST. 46% of ST women experience some form of spousal violence (Physical, emotional or sexual). These figures are higher than the national and rural figures. During the field visit, we found that the PHC MOs and the health workers are lacking in awareness of the magnitude of these problems. No specific focus on these issues is being given in general.
3. Only 2.6% of the ST families have any type of health related insurance.

#### **6.6. Health facilities:**

##### **6.6.1. Primary Health Centres:**

1. Each PHC caters to a population of 17,000 to 65,000, the average being 40,000 spread over 59 villages and the average distance of the farthest village from the PHC is 24 km. The distance between the PHC and the nearest referral centre is 28 km. Nearly 18 percent of the villages do not have proper roads and 11 percent are not accessible during certain periods of the year. In terms of population coverage and accessibility, the PHCs in these ST areas are overburdened and not easily accessible by all the villages under their care.
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back up support when the medical officers are on leave in PHCs with single MO. On an average 20 % of the posts of paramedical staff (excluding ASHA) are vacant.

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2. The overall hygiene of the centres and the children was very poor in the centres visited. In some states there were no buildings for the centre and the worker managed by cooking in her home. None of the AWCs had a toilet. The quality of the food grains that were stocked was poor. Many of the centres had no weighing scale. In areas prone for terrorist / Maoist attacks,(Jharkhand) we were told that 1/3<sup>rd</sup> of the budget of the centre goes to the Maoist supervisor – Mapahadia people.
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<sup>56</sup> NFHS 3 state level data

given periodically certain non health related jobs. These difficulties decrease their morale and enthusiasm in the work.

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#### **6.6.4. Community Health Centres:**

1. Each CHC serves a population of 1,34,250, spread over 100 villages and is a referral centre for 5 PHCs. The CHCs are currently provided on the population norm of 1 per 1,20,000 population in general areas and 1 per 80,000 population in tribal / desert areas.
2. Only 72% of the CMC buildings were maintained well and functional toilets were available only in 58% of them. Some of the crucial facilities which contribute to adequate health care during emergencies were found to be wanting. Obstetricians, Surgeons and Anaesthetists were available only in 44%, 30% and 20% of them respectively. 44% of the CHCs had facilities for Medical Termination of Pregnancy and 14% had blood storage facilities. Only around 40% of the CHCs were equipped to address the Obstetric and infant related emergencies and 22% Surgical emergencies due both to poor infrastructure and non availability of skilled human resource. Functional X ray facilities were available in 66% and ambulance facilities in 85% of the CHCs.

## **7. Recommendations:**

### ***7.1. Disaggregate ST Data collection:***

Systems and mechanisms to collect disaggregate data pertaining to the health of the ST population at the village, block, district and the State levels on an ongoing basis need to be established to monitor the health related indicators prospectively.

### ***7.2. Under Five Child Health:***

1. The mechanism for recording of birth and death of ST children at the PHC level needs to be strengthened by efficient utilization of the services of ASHA, AWW and ANM. The PHC MO needs to have a pro active mechanism to track and record these life events as and when they happen.
2. The PHCs and the CHCs must be adequately equipped in terms of infrastructure, human resource and equipments to address the illnesses in children. Accessibility, availability aspects of health care need to be strengthened.
3. The Medical Officers and the paramedical staff need to be sensitized about the extent of mortalities in children. They must undergo relevant initial skill development trainings before appointment to the facilities and periodic in service training thereafter.
4. There is a clear need for strengthening and ongoing monitoring of focused interventions in the areas of Immunization, Vitamin A supplementation and Anganwadi services in the ST areas. The possibility of introducing additional incentives to ANM, ASHA as well as the parents of children may be examined for strengthening these interventions.
5. Focus should be given in the ST areas on regular Health education activities specifically targeting the issues of nutrition, immunization, utilization of nutritional services and childhood illnesses.

### ***7.3. Maternal Health:***

1. Pro active promotion of early ANC registration, provision of all the components of ANC care and counseling regarding complications and delivery preparedness need to be ensured through ASHA and ANMs. This should be actively monitored by the MO on a

monthly basis. As there is poor compliance to oral iron preparations, use of parenteral safe iron sucrose formulations need to be considered.

2. Effective communication mechanism must be established between the community, sub center ANM/ASHA, the PHC medical officer and the FRU especially with regard to delivery care. Proper delivery preparedness must be discussed with each and every pregnant mother. For people living in very remote areas, arrangements for living near the PHC around the time of delivery (transit accommodation) need to be established, especially in ST areas. Maharashtra is planning this model. (Maher scheme of giving transit accommodation to the pregnant woman in/near the PHC).
3. The Sub center, PHC and FRU need to be well equipped and adequately staffed to provide appropriate levels of obstetric care. Development of delivery facilities in the Sub center needs to be examined in the ST areas.
4. Information related to ANC, Institutional deliveries, temporary and permanent methods of family planning need to be regularly included in all health education activities in the community. All the misconceptions regarding the various methods of FP need to be addressed. Gaps in provision of care in the area of family planning need to be filled. MTP services must be made available in all the FRUs.
5. Giving incentives even to the home deliveries needs to be reconsidered as it has a negative impact in promoting institutional deliveries<sup>57</sup>

#### **7.4. Adult Health:**

1. Nutrition programs of AWC should proactively focus on the nutritional inputs of all intended beneficiaries, i.e., Pregnant women, Lactating women and the adolescent girls.
2. Disaggregate ST data must be collected at the PHC, Block and District levels for the communicable and non communicable diseases. As this involves additional human

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<sup>57</sup> NB 2 : Cash benefit of Rs. 500/- per live births would be available to all pregnant women (BPL) on registration for ANC with the ASHA/ANM/PHC and the cash benefit is to be disbursed at the time of delivery, irrespective of the place of delivery. - JANANI SURAKSHA YOJANA – Guidelines for Implementation - ITS MODIFIED PARAMETERS-Ministry of Health & Family Welfare, Government of India

resource, adequate provisions must be made to address this important ongoing activity.

3. There is need for more DMCs in the ST areas. In view of the peculiarity of the scattered population, ST areas should be provided DMCs as per their actual requirement and not merely on the basis of the prescribed population norms. To strengthen the supervisory mechanism under DOTS in ST areas because of their scattered population, separate DOTS supervisors must be sanctioned for the ST areas. The PHC MO in the ST areas must be more actively involved in DOTS programme.
4. ICTC facilities need to be established in the FRU and must be available at least once a week at the PHCs.
5. Awareness programs need to be strengthened in the ST areas for HIV and TB.
6. Medical officers need to be sensitized about the genetic disorders in the ST.
7. Facilities need to be provided at the PHCs for primary level treatment of non communicable diseases.

**7.5. Other factors that contribute to the Health status:**

1. Primary mental health care programme needs to be integrated at the PHC level.
2. Issues like Alcohol use, Tobacco or other substance use and spousal violence need to be addressed by multipronged approach of health education, counseling rehabilitation etc. The health staff must be sensitized to the prevalence of these social problems.
3. Community based health insurance plans need to be popularized in the ST areas, linking them with the micro credit schemes.

**7.6. Health facilities:**

1. As the population density in the country is not uniform especially in the ST areas, infrastructural provision and improvement as per norms of NRHM should be effected on priority basis in ST areas by setting up of more Anganwadis, Subcentres, PHCs and CHCs in just relation to the actual needs and accessibility of these areas. It would make eminent sense to link the number not to the population but to the case load and distance of the village / habitation.

2. The Infrastructure, Human resource availability, laboratory facilities, equipments, supplies, transport facilities of the PHCs and CHCs need improvement as per what is guaranteed by NRHM. Recruitment of adequate medical and nursing man power to the ST areas by offering more attractive benefits will need to be considered. Crucial facilities which contribute to adequate health care during emergencies, labour, infant and childhood illnesses need to be made available in PHCs and CHCs round the clock. Priority should be given to posting of an additional ANM to the Subcentres and additional medical officers to the PHCs in the ST areas. Providing local staff from among the ST for working in ST areas needs to be seriously considered. The health staffs need to have periodic skill up gradation training.
3. Communication facilities between the community and the ANM and ambulance related facilities need to be improved.
4. All ST habitation falling within the revised population norm of 300 must be provided one AWC. The norm should be further relaxed to ensure that every ST habitation, irrespective of the population, has this basic facility related to nutrition security. Food and other materials for use in the AWC need to be supplied at its doorstep regularly. Efforts should be made to provide a ST woman as an AWW in ST areas. Her Honorary status needs to be reconsidered and her remuneration needs to be paid regularly without undue delay. The nutritional needs of children in the crucial age bracket of 0 to 2 years need to be specifically addressed.
5. The quality of care can be improved by conducting regular mandatory specialist camps at the PHC level.
6. Strengthening of the monitoring mechanism in ST areas should receive special attention of the health authorities. Separate periodic monitoring of the activities of the Anganwadis, Subcentres, PHCs and CHCs need to be ensured. Desirability of involving civil society through eminent activist or a credible NGO may also be considered.

#### ***7.7. Other recommendations to strengthen certain aspects of NRHM:***

1. Human resource:

Recruitment of adequate medical and nursing man power to the ST areas by offering more

attractive benefits will need to be considered. The salary for contract workers must be on par with the regular service people. It is felt that many contract workers are not fully involved with the work. As many of the support staff are recruited on contract basis, they are not given residential quarters and this needs to be addressed.

As the clinical responsibilities of the medical officer have increased with increasing hospital deliveries and case loads, there is a felt need to have more human resource for clerical and supervision work related to building construction.

## 2. Fund flow:

The designated funds for NRHM for various levels need to be released in time to avoid last minute hurry to spend. The cheques should be accompanied by clear instructions as to the purpose for which they are ear marked (Annual Maintenance Grant, Untied Fund, Rogi Kalyana Samiti) to avoid confusion and hesitation in using them. There needs to be more decentralization of fund management and the medical officer should be given independent money drawing power during emergencies. Transparency of fund utilization must be ensured by adequate external auditing.

3. The Tribal Welfare Directorate needs to be more actively involved in the policy decisions, project planning, implementation and monitoring of the activities of NRHM

## 4. AYUSH:

The process of mainstreaming of AYUSH needs to go beyond posting of an AYUSH medical officer as an additional medical officer in the PHC. Documentation of the revitalization of the local health traditions in the ST areas must be done proactively.

## **8. Conclusion:**

This study was born out of an urgent and felt need in the health sector to study comprehensively and systematically the health situation of the scheduled tribes in the country so that recommendations to strengthen the programmes of NRHM and improve the situation could be formulated. This study which was conducted between 15<sup>th</sup> August 2008 and 15<sup>th</sup> September 2009 included two main components, namely, a desk review of relevant national level documents pertaining to the health status of the ST and a field review in selected ST dominated areas across 5 states (Jharkhand, Madhya Pradesh, Orissa, Maharashtra and Karnataka) which are home for 47% of the Schedule Tribes of the country. Among the states selected for this study, 3 belong to the high focus non-NE group (Jharkhand, Madhya Pradesh & Orissa), while two fall under the non high-focus large group (Maharashtra & Karnataka). The key areas that were studied to understand the Health Status and Health care delivery system and mechanism were 1. Under Five Child health, 2. Maternal health, 3. Adult health, 4. Other significant factors that impact the health status and 5. The status of Health facilities. The study yielded valuable information and insight to the health status in the selected ST areas to identify the major concerns and formulate relevant recommendations for NRHM.

# ANNEXURES

## Annexure 1.

### Synopsis of the Technical Resource Group meeting:

The Technical Resource Group Meeting was convened on 09.08.08 at Vivekananda Institute of Leadership Development, Mysore. The participants were Prof. Satyanarayana, Dr. Misra, Dr. Suresh Patil, Dr. Anant Panth, Dr. R.Balasubramaniam, Dr. M.R.Seetharam, Dr. Sridevi, Dr. Anil and Dr. V.S. Sridharan.

The important issues that were discussed in the meeting were:

1. Scope of the study beyond the deliverables mentioned in the proposal - this study is an opportunity for bringing about policy changes with respect to the tribal health situation across the country.
2. Clarity in nomenclature with regard to terms like Tribes, Schedule tribes Primitive Tribal Groups.
3. The study will focus on forest dwelling tribal groups primarily.
4. The rationale for choosing the districts in the states.
5. To choose the most important 10 or 12 indicators.
6. The target group for the questionnaires for various levels
7. Ethical issues
8. Resource material for the desk review.

## **Annexure 2**

### **Synopsis of the Project Oversight Team meeting:**

Project Oversight Team Meeting was convened on 24.10.08 at Vivekananda Institute of Leadership Development, Mysore. The participants were Ms. Ganga Murthy, Ms. Anagha, Dr. Usha Vasthare, Dr. R.Balasubramaniam, Dr.Anil and Dr. V.S. Sridharan.

The primary objective of the meeting was to share the progress of the study and get inputs from the participants for strengthening the process. The following important issues were discussed:

1. Sources for the materials for the desk review
2. Definition of the schedule tribes in the context of the study
3. The process of selection of the districts/blocks/PHCs. It was suggested that it would be better to choose two districts per state, 3 blocks per district and 3 PHC per block and one Sub centre per PHC and one CHC which is a referral centre for the PHC chosen. It was suggested that the District Hospital could also be included in the field visit. This will have to be decided based on the field trial and feasibility.
4. The questionnaire that was prepared was felt to be too elaborate and it was suggested that they need to be modified and fine tuned as per the guidelines shared above and also after reviewing the secondary data available for the area.
5. Regarding the ethical issue it was decided if verbal consent is obtained and not necessarily written consent.

### Annexure 3

#### Milestones:

Date	Event
June 2008	Study proposal submitted to WHO
15-Aug-08	Official project start date
21-Aug-08	First meeting of the Technical Resource Group at Mysore; sample size and districts for study finalized
01-Oct-08	First installment of funds received from WHO
24-Oct-08	First meeting of the Project Oversight Team at Mysore
21-Nov-08 05-Dec-08	Field testing of instruments at H.D.Kote & Kodagu (Karnataka)
25-Dec-08	Interim progress report submitted to GOI & WHO
21-Jan-09	Internal meeting to further evolve the study methodology & instruments
30-Jan-09	Conference call with Ms.Anagha & Ms.Ganga Murthy to share the progress on the study and get their feedback on the instruments
Feb, Mar 09	3. Instruments finalized 4. Desk review conducted 5. Field tour plan evolved
20-Mar-09	Second installment of funds received from WHO
01-Apr-09	Request for no-cost extension of project for three months due to intervening general elections in May-09
09-Apr-09	Project extension approved by GOI & WHO
5 <sup>th</sup> to 13 <sup>th</sup> June 09	Field visit to Jharkhand (Gumla and Dumka districts, Ranchi)
21 <sup>st</sup> to 27 <sup>th</sup> June 09	Field visit to Maharashtra (Yavatmal & Raigad districts)
22 <sup>nd</sup> to 25 <sup>th</sup> June 09	Field visit to Orissa (Mayurbhanj district & Bhubaneswar)
12 <sup>th</sup> to 18 <sup>th</sup> July 09	Field visit to Madhya Pradesh (Jhabua district) & Mumbai
9 <sup>th</sup> to 15 <sup>th</sup> Aug 09	Field visit to Madhya Pradesh (Mandla district & Bhopal)
24 <sup>th</sup> to 29 <sup>th</sup> Aug 09	Field visit in Karnataka (Dakshina Kannada & Mysore districts)
25 <sup>th</sup> Oct 09	Draft study report submitted
	Study report finalized

**Annexure 4**  
**Study teams:**

	<b>SVYM team</b>	<b>Local team</b>
To Jharkhand	3. Dr. Anil C. 4. Dr. Bindu Balasubramaniam 5. Dr. Nandini Vallath	Personnel from the NGO: Vikas Bharti, Bishunpur
To Maharashtra	3. Dr. V.S.Sridharan 4. Dr. Chetana Rangaraju 5. Ms. Sunita	8. Personnel from District level PLHIV network of Yavatmal 9. Personnel deputed by the District Health Officer of Raigad
To Orissa	6. Dr.M.A.Balasubramanya 7. Dr. Vivek Padvetnaya	8. Personnel from the NGO: Friends of Tribals Society, Orissa 9. Mr. Pradeep Swain
To Madhya Pradesh	Team-1 4. Dr. V.S.Sridharan 5. Dr. Dennis Chauhan Team-2 5. Dr. Anil C. 6. Dr. S.Rajendra Prasad 7. Dr. Meghana	Personnel deputed by the Chief Medical & Health Officers of Jhabua & Mandla
To Karnataka	Team-1 3. Mr. Muthukrishna 4. Dr. Seethalakshmi 5. Dr. Shreyas Team-2 • Dr. Rekha Shanmukha • Ms. Nandini Shankar Team-3 4. Dr. Prashanth 5. Dr. Dennis 6. Ms. Nandini Shankar	Personnel from respective Taluk (Block) Health Offices

## Annexure 5

### Abbreviations:

Number	Abbreviation	Full form
1.	ASHA	Accredited Social Health Activist
2.	AFB	Acid Fast Bacillus
3.	AIDS	Acquired Immune Disease Syndrome
4.	ARI	Acute Respiratory Infection
5.	AWC	Anganwadi Centre
6.	AWH	Anganwadi Helper
7.	AWW	Anganwadi Worker
8.	ANC	Ante Natal Care
9.	ANM	Auxiliary Nurse Midwife
10.	AYUSH	Ayurveda, Yoga, Unani, Siddha and Homeopathy
11.	BEMOC	Basic Emergency Medical and Obstetric Care
12.	BMI	Body Mass Index
13.	CGHS	Central Government Health Scheme
14.	CMO	Chief Medical Officer
15.	CMR	Child Mortality Rate
16.	CHC	Community Health Centre
17.	CBR	Crude Birth Rate
18.	MTP	Medical Termination of Pregnancy
19.	DF	Deep Freeze
20.	DMC	Designated Microscopy Centre
21.	DOTS	Directly Observed Treatment Short course
22.	DHO	District Health Officer
23.	DLHS	District Level Household Survey
24.	DLHS 2	District Level Household Survey - 2002 -2004
25.	DLHS 3	District Level Household Survey - 2007 - 2008
26.	ESIS	Employee State Insurance Scheme
27.	FRU	First Referral Unit
28.	FGD	Focused Group Discussion
29.	HP	Health Personnel
30.	HIV	Human Immunodeficiency Virus
31.	ILR	Ice Lined Refregirator
32.	ICMR	Indian Council of Medical Research
33.	IPHS	Indian Public Health System

34.	IYCF	Infant and Young Children Feeding practice
35.	IMR	Infant Mortality Rate
36.	ICDS	Integrated Child Development Scheme
37.	ICTC	Integrated counseling and Testing Centre
38.	IMNCI	Integrated Management of Neonatal and Childhood Illnesses
39.	IFA	Iron Folic Acid
40.	MMR	Maternal Mortality Ratio
41.	MO	Medical Officer
42.	NFHS	National Family Health Survey
43.	NFHS 1	National Family Health Survey (1992 - 1993)
44.	NFHS 2	National Family Health Survey (1998 - 1999)
45.	NFHS 3	National Family Health Survey (2005 - 2006)
46.	NRHM	National Rural Health Mission
47.	NMR	Neonatal Mortality Rate
48.	NSP	New Sputum Positive
49.	NGO	Non Governmental Organization
50.	OBG	Obstetrics and Gynaecology
51.	OPD	Out Patient Department
52.	PNC	Post Natal Care
53.	PHC	Primary Health Centre
54.	PTG	Primitive Tribal Group
55.	POT	Project Oversight Team
56.	RCH	Reproductive and Child Health
57.	RTI/STI	Reproductive Tract Infections/Sexually Transmitted Infections
58.	RNTCP	Revised National Tuberculosis Programme
59.	RHS	Rural Health Statistics
60.	RPR	Rapid plasma reagin
61.	ST	Scheduled Tribes
62.	SDMC	School Development & Monitoring Committee
63.	SC	Sub Centre
64.	SVYM	Swami Vivekananda Youth Movement
65.	TRG	Technical Resource Group
66.	TFR	Total Fertility Rate
67.	TB	Tuberculosis
68.	U5MR	Under Five Mortality Rate
69.	UNDP	United Nations Development Programme

70.	UNICEF	United Nations International Children's Emergency Fund
71.	Vit A	Vitamin A
72.	WHO	World Health Organization

## Annexure 6

### Glossary

No	Term	Explanation
1.	Prevalence	The total number of all individuals who have an attribute or disease at a particular time (or during a particular period) divided by the population at risk of having the attribute or disease at this point in time or midway through the period.
2.	Neonatal Mortality Rate	Number of neonatal deaths in a given year per 1000 live births in that year.
3.	Infant Mortality Rate	Ratio of infant deaths registered in a given year to the total number of live births registered in the same year.
4.	Child Mortality Rate	Number of deaths of children dying between the first and the fifth birth days per 1000 children in the same age group in a given year.
5.	Under Five Mortality Rate	Annual number of deaths of children age under 5 years, expressed as a rate per 1000 live births.
6.	Under weight	Low Weight for Age - denotes Acute Malnutrition
7.	Stunting	Low Height for Age - denotes Chronic Malnutrition
8.	Wasting	Low Weight for Height - denotes Past Malnutrition
9.	Maternal Mortality	The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes
10	Fertility	Actual bearing of children
11	Crude Birth Rate(Birth Rate)	The number of live births per 1000 estimated mid year population, in a given year.
12	Total Fertility Rate	The average number of children a woman would have if she were to pass through her reproductive years bearing children at the same rates as the woman now in each age group.
13	Teenage Pregnancy	Pregnancy under 19 years of age

14	Annual NSP case detection rate %	Percentage of the New Pulmonary Sputum Positive cases detected out of the expected New Pulmonary Sputum Positive cases based on the Annual Rate of Infection
15	Cure Rate of NSP cased	Percentage of the NSP cases cured out of the total NSP cases put on treatment
16	Default	A patient who has not taken anti-TB drugs for 2 months or more consecutively after starting treatment
17	Default rate of NSP cases	Percentage of the NSP cases defaulted out of the total NSP cases put on treatment.
18	DOTS centre	Center which carries out the DOTS programme under the supervision of the RNTCP.
19	DMC	A laboratory, designated by the RNTCP, with facilities for diagnosing Tuberculosis by Sputum microscopy
20	NGO	Non Governmental Organization
21	DOTS Plus	RNTCP to address the problem of Multi Drug Resistant Tuberculosis.
22	Wealth Index	The wealth index is constructed by combining information on 33 household assets and housing characteristics, such as ownership of consumer items, type of dwelling, source of water and availability of electricity, into a single index. The household population is divided into five equal groups of 20 percent each (quintiles) at the national level from 1 (lowest, poorest) to 5 (highest, wealthiest).
23	Yashaswini	Government sponsored Health Insurance Scheme for the rural population.
24	Kit A	Oral Rehydration Salt, Iron Folic Acid tablets large, Iron Folic Acid tablets small, Paracetamol tablet, Cotrimoxazole Pediatric, Cotrimoxazole Single strength, Zinc tablet and Vitamin A solution.

## Annexure 7

### Health status and Health services indicators - Jharkhand:

#### 1. Child Health:

##### 1.1 Mortality Indicators

##### 1.1.1 Neonatal Mortality Rate:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	NFHS 3 (2005-06)
National Average	48.6	43.4	39
State Average	NA	36.6	48.6
State Rural	NA	NA	58.8
State ST	NA	NA	64.3

##### 1.1.2 Infant Mortality Rate:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	NFHS 3 (2005-06)
National Average	78.5	67.6	51.5
State Average	NA	54	69
State Rural	NA	NA	73.1
State ST	NA	NA	93

##### 1.1.3 Child Mortality Rate:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	NFHS 3 (2005-06)
National Average	33.4	29.3	15.8
State Average	NA	25.4	26.1
State Rural	NA	NA	44
State ST	NA	NA	50.1

##### 1.1.4 Under Five Mortality Rate (U5MR):

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	109.3	94.9	66.8
State Average	NA	78.3	93
State Rural	NA	NA	101.2
State ST	NA	NA	138.5

## 1.2 Nutritional status Indicators and trends:

### 1.2.1. Under weight: Weight for Age - less than -2 SD:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	42.7	39.1
State Average	-	54.3	54.6
State Rural	-	58	60.7
State ST	-	61	64.3

### 1.2.2. Percentage of Stunting - Height for Age - less than -2SD:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	51	45.1
State Average	-	49	47.2
State Rural	-	53.3	53.4
State ST	-	57.2	54.5

### 1.2.3. Percentage of Wasting in Children - Weight for Height - less than -2SD:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	19.7	18.8
State Average	-	25.4	35.8
State Rural	-	27.4	34.1
State ST	-	32.7	39.6

### 1.2.4. Percentage of children with anemia - Hb <11g.:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	74.3	67.2
State Average	-	84.2	70.3
State Rural	-	84.8	73.4
State ST	-	95.7	79.5

## 1.3. Basic child health service provision indicators:

### 1.3.1. Percentage of children given all the basic immunizations:

	NFHS 1(1991-92)	NFHS 2(1997-98)	DLHS 2(2002-2004)	NFHS 3(2005-06)	DLHS 3(2007-2008)
National Average	35	42		48.1	NA
State Average	NA	8.8	25.7	34.2	54.1
State Rural	NA	NA	18.9	29.5	52.4
State ST	NA	NA	NA	28.9	NA

Dumka (ST-44.8%)	-	-	2.5	-	51.4
Gumla(ST 67.2%)	-	-	19.8	-	67.8

### 1.3.2. Percentage of children who have not received any vaccination:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)	DLHS 3 (2007-2008)
National Average	-	11.5	4.5	NA
State Average	-	27.4	4.4	12.8
State Rural	-	NA	5	13.6
State ST	-	NA	3.9	NA

### 1.3.3. Vitamin A administration:

NFHS figures for Vitamin A administration:

	Vit. A given in the last 6 months to Children aged 12 - 35 months		Vit. A given in the last 6 months to Children aged 6 - 59 months	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3
National Ave	29.7	25.1	NA	18.2
National Rural	27	24.5	NA	17.7
National ST	26	21.3	NA	14.8
Jharkhand Ave	10	27.5	NA	19.7
Jharkhand Rural	NA	27.9	NA	19.6
Jharkhand ST	NA	25.9	NA	17.8

DLHS 3 figures for vitamin A administration:

	Jharkhand	Dumka (ST-44.8%)	Gumla (ST - 67.2%)
Children (9 to 35 months) who have received at least one dose of Vitamin A:	61.6	61.3	77.8
Children >21 months who have received 3 doses of Vitamin A	NA	15.5	17.8

**1.3.4 Indicators of appropriateness of treatment and awareness about for some important child hood illness:**

**1.3.4.1. NFHS 3:**

	Indicators	National			Jharkhand		
		Urban	Rural	ST	Urban	Rural	ST
1.	% children under 5 given right treatment for ARI	15.5	11.7	13	NA	11.9	NA
2.	% children with fever receiving Treatment for Malaria	10.3	7.6	12	0	5	8.1
3.	% of children with Diarrhoea given ORS at the health facility	32.6	23.8	29	31.8	14.9	11.7
4.	% women with Knowledge about ORS	83.7	67.7	61	91.5	53.2	47.3

**1.3.4.2. DLHS:**

No	Indicators %	State urban		State rural		Dumka (ST-44.8%)	Gumla (ST- 67.2%)
		DLHS 3	DLHS 2	DLHS 3	DLHS 2	DLHS 3	DLHS 3
1.	% women aware of the danger sign of ARI	68.7	69.5	37.3	53.8	NA	NA
2.	% children receiving ORS for diarrhoea	38.6	39.5	19.9	20.8	5.7	22.6
3.	% children receiving treatment for ARI	70.6	69.9	55	55.2	66.8	42.1

## 2 Maternal Health Service and Awareness indicators:

### 2.1 Antenatal Care:

#### 2.1.1. NFHS 2 and 3 figures:

Indicators	National Ave.		State Ave.		State Rural		State ST	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3
%ANC in I Trimester	33	43.9	18	33.2	NA	26.8	NA	23.4
% 3 or more ANC	43.8	59.5	24	35.9	NA	28.4	NA	25.8
% with No ANC by health professional	21.7	18.5	58.3	40.6	64.1	46.8	NA	50
% with 2 or more TT	72.2	79.5	50.6	67.6	47.3	62.9	NA	54.1
% who received IFA	84	64.9	32.7	45.9	28.2	45.9	NA	52.4
% who consumed 3 months IFA	81.3	26.8	NA	14.2	NA	11.2	NA	15.3

#### 2.1.2. The DLHS 2 and 3 figures:

No	Indicators %	State urban		State rural		Dumka (ST-44.8%)		Gumla (ST - 67.2%)	
		DLHS 2	DLHS 3	DLHS 2	DLHS 3	DLHS 2	DLHS 3	DLHS 2	DLHS 3
1.	ANC in I trimester	56	62.6	19.5	27.5	NA	20.4	NA	36.4
2.	Mothers with 3 or more ANC	65	65.1	21	26.9	18.6	27	26.2	30
3.	Mothers who received at least 1 TT	80.3	84	39.2	51.9	34.2	62.6	45.4	62.6
4.	Mothers who consumed at least 100 days of IFA	27.9	33.9	7.5	17.6	NA	NA	NA	NA
5.	Mothers with Full ANC	24.4	26	5.1	5.8	NA	NA	NA	NA

### 2.1.3. Components of ANC in Jharkhand - NFHS 3:

Components	Urban	Rural
Weighed	68.4	46.4
Blood pressure measured	80.7	48.3
Urine sample taken	69.1	36.4
Blood sample taken	70.2	37.6
Abdomen examined	81.1	54.5

### 2.1.4. Percentage receiving information on specific pregnancy complications in Jharkhand - NFHS 3:

Information given	Urban	Rural
Vaginal bleeding	21.8	12.5
Convulsions	27.4	13.7
Prolonged labour	29.5	21.3
Where to go if experienced pregnancy complications	42.8	28.1

## 1.2 Delivery care:

### 2.2.1. NFHS data:

Indicators	National Ave.		State Ave.		State Rural		State ST	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3
% of institutional delivery	44.8	48.2	13.9	18.3	7.5	10.3	4.6	7.8
% births assisted by health personnel	53.4	55.5	17.5	27.8	11.1	20.3	5.9	15.1

### 2.2.2. DLHS 3:

No	Indicators	State urban	State rural	Dumka (ST-44.8%)	Gumla (ST - 67.2%)
1.	% of Institutional delivery	59.3	13.4	9.2	10.3
2.	% home delivery by skilled personnel	12.3	8.7	8.1	6.6

(AS per NFHS and DLHS - Health personnel/Skilled personnel: Doctor, auxiliary nurse midwife, nurse, midwife, lady health visitor, or other health personnel. Does not include TBA/Dais).

**Postnatal care:**

**2.3.1. NFHS 2 and 3 data:**

Indicators	National Ave.		State Ave.		State Rural		State ST	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3
% PNC within 48 hours of delivery	14.2	44.5	NA	17	NA	9.9	NA	9.6

**2.3.2. DLHS 3 data:**

No	Indicators %	State urban	State rural	Dumka (ST-44.8%)	Gumla (ST-67.2%)
1.	PNC for mother within 2 weeks of delivery	58.5	28	NA	NA
2..	PNC for mother within 48 hours of delivery	NA	NA	25.3	27.5
3.	children seen within 24 hours of delivery	NA	NA	27.5	28
4.	children seen within 10 days of delivery	NA	NA	29.6	30.7

**2.4 Breast feeding practices (In the tribal areas as per the NFHS 3 and DLHS):**

		NFHS 3			DLHS 3				
		Jharkhand State	Rural	ST	Jharkhand			Dumka (ST-44.8%)	Gumla (ST-67.2%)
					Total	Rural	Urban		
1	Breastfed within 1 hour of birth	11	9.5	9.8	34.6	34.2	38.3	38.9	38.7
2	Breastfed within 1 day of birth	45	43.7	53.1					
3	Prelacteal feeds	66	66.1	51.5					
4	Exclusive breastfeeds for 6 months	58			49.5	48.4	60	49	42.4

## 2.5 Fertility Indicators:

### 2.5.1. NFHS data:

Indicators	National Ave.			State Ave.			State Rural			State ST		
	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3
Crude birth rate	NA	NA	21.9	NA	23.7	26.8	NA	23.5	28.8	NA	NA	NA
Total Fertility Rate	3.39	2.85	2.5	NA	2.76	3.31	NA	2.72	3.69	NA	2.30	3.79
Teenage pregnancy	NA	NA	19.9	NA		27.5	NA		32.7	NA		26.6
% of birth order of >4	30.9	27.5	22.2	NA	32.9	34.8	NA	33.7	39	NA	39.2	43.1

### 2.5.2. DLHS 3 data (Marriage and fertility):

No	Indicators %	State urban	State rural	Dumka (ST-44.8%)	Gumla (ST - 67.2%)
2.	Teenage marriage(girls) before 18 years	14.7	39.6	51.1	29
3.	Teenage births out of total births	4.3	6.1	15.7	11.9
4.	Birth order of 2 and more in women 20 - 24 years of age	42.2	52.4	56.7	66.2

## 2.6 Family planning indicators:

### 2.6.1 NFHS:

No	Indicators	National					Jharkhand				
		NFHS 3			NFHS 2	NFHS 1	NFHS 3			NFHS 2	NFHS 1
		Urban	Rural	ST			Urban	Rural	ST		
1.	Knowledge of condom/Nirodh use-Men	97.6	90.3				97.3	77.3			
2.	Knowledge of condom/Nirodh use-Women	84.9	68.4		76.1	71	90.3	47.2			
3.	Current contraceptive (modern) use women	55.8	45.3	43			49.9	25.2	14.7	24.9	
4.	Current use of condom/Nirodh	9.8	3.2	1.7	3.1	2.4	7.9	1.1	1.5	1.1	
5.	Source of female sterilization-Govt.	74.2	87.7				64.5	77.1			

6.	Source of female sterilization- Private	24.3	11.4				31.4	21.3			
7.	Source for condoms - Govt	8.4	20				3.2	NA			
8.	Source for condoms - Private+Shops	52.1	37.5				79.4	NA			
9.	Source for pills- Govt	10.4	18.2				5	11.8			
10.	Source for pills- Private+Shops	72.9	58				87.5	76.5			
11.	Unmet need for FP	9.7	14.1	14			13.4	26.2	29.2		

### 2.6.2. DLHS:

	DLHS 3				DLHS 2			
	Rural	Urban	Dumka (ST-44.8%)	Gumla (ST-67.2%)	Rural	Urban	Dumka (ST-44.8%)	Gumla (ST-67.2%)
Unmet need for FP %	36.2	25.3	34.2	38.1	37.5	22.8	35	52.8

### 3. Adult health indicators:

Indicators	National			Jharkhand		
	Urban	Rural	ST	Urban	Rural	ST
% women with BMI <18.5	25	40.6	47	29.8	48	47.2
% Men with BMI <18.5	26.5	38.8	41	30.3	42.1	42.1
% Women with Anemia	50.9	57.4	69	58.6	73.3	85
% Men with Anemia	17.7	27.7	40	23.1	42.2	53.6

### 4. Indicators of HIV knowledge and Prevalence:

#### 4.4 NFHS 3:

	Indicators	National			Jharkhand		
		Urban	Rural	ST	Urban	Rural	ST
1.	% Women with comprehensive knowledge about HIV	30.3	11	8.1	32.6	4.3	4.2
2.	%Men with comprehensive knowledge about HIV	46.6	25.1	20	57.2	11.6	11.1

#### 4.2. DLHS 3:

No	Indicators	State urban	State rural	Dumka (ST-4.8%)	Gumla (ST-67.2%)
1.	% unmarried women 15 to 24 years who have heard of HIV/AIDS	86	43.5	50.8	53.5

2.	% ever married women 15 to 49 years who have heard of HIV/AIDS	68.3	18.7	18.7	26.8
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(Comprehensive knowledge about HIV according to NFHS:

The use of a condom for every act of sexual intercourse, Having just one uninfected faithful partner can reduce the chance of getting HIV/AIDS, A healthy looking person can have HIV/AIDS, Reject the two most common misconceptions, namely that HIV/AIDS can be transmitted by mosquito bites and by sharing food.)

Percentage of people with comprehensive knowledge about HIV in the ST areas is low compared to the national and urban areas though percentage of women who have heard about HIV/AIDS ranges from 18.7 to 53.5 in the ST districts.

#### 4.3. Prevalence of HIV:

	Men			Women			Total
	Urban	Rural	Total	Urban	Rural	Total	
National	0.41	0.32	0.36	0.29	0.18	0.23	0.28
Jharkhand			0.18			0.09	0.13

#### 5. Performance indicators for RNTCP:

##### 5.4 Annual report of RNTCP - 2008-2009:

Place	Annual NSP case detection rate %	Cure rate of NSP cases %	Default of NSP cases %	Default of Retreatment cases %
Jharkhand	75	83	5	11.5
Dumka (ST-44.8%)	99	90		
Gumla (ST - 67.2%)	65	91		
ST Districts	82	85		
India Total	72	84	6	14.9
Target	70	85		

##### 5.2. Knowledge about TB in ST - NFHS 3:

% of people who	India	Jharkhand		ST	
		Women	Men	Women	Men
Have heard of TB	85.3	77	87	66.9	77.7
Have misconceptions about spread of TB	51.3	51.4	64.4	42.2	62.9
Know that it spreads through cough/Sneeze	50.1	36.8	29.5	29.7	19.6
Believe that TB can be cured	78.6	85.6	92.1	79	88.5
Want to keep it a secret	16.7	12.1	8.9	14	9.8

## 6. Performance indicators for Leprosy, Malaria and Kala Azar:

### 6.1 Leprosy:

Jharkhand State	Leprosy as on March 2008	
	<1/10,000 cases in	>1/10,000 cases in
Total no of districts 24	10 districts	14 districts

### 6.2. Malaria:

Malaria					
Total cases		PF cases		Deaths	
2007	2008	2007	2008	2007	2008
1,84,878	1,84,007	45,926	56,342	31	17

### 6.3. Kala Azar:

Number of cases		Deaths	
2007	2008	2007	2008
4,803	3,368	20	5

## 7. Indicators for Non communicable illnesses:

	Diabetes		Asthma		Thyroid disorder	
	Women	Men	Women	Men	Women	Men
Urban India	1374	1383	1648	1329	1339	369
Rural India	641	860	1719	1797	758	392
ST	349	477	1749	1973	753	567
Lowest WI	371	705	1723	2416	529	384
Highest WI	1503	1957	1639	1248	1739	454
Jharkhand Urban	1394	1244	1394	498	523	249
Jharkhand Rural	381	368	1253	367	981	0

## 8. Other indicators that contribute to the Health status:

### 8.1 Source of Health care:

	India		Jharkhand	
	Government	Private	Government	Private
Urban	29.6	69.5	27.1	70.8
Rural	36.8	62.5	20.7	76.2
Lowest WI (WI - 1)	39.4	59.9	20.4	76.9
WI - 2	37.1	62.2	21.7	75.9
ST	NA	NA	NA	NA

## 8.2. Contact with health worker:

Percentage with any contact with HW in the past 3 months:

	ANM/LVH	AWW	ASHA	MPW	Any HW
Urban India	6.8	4.1	0	0.7	10
Rural India	14.2	12.3	0.1	0.7	20.8
ST	12.5	13.5	0.1	1.2	19.8

## 8.3. Place of Meeting the HW:

	Home	AWC
Urban India	62.7	20.1
Rural India	66	30.8
ST	56.3	44.5

#### 8.4. Topics discussed during the meeting with the HW:

	Topics discussed	Never married	Pregnant	Non pregnant women	
				Current Contraceptive users	Current Contraceptive non users
1.	Family planning	2.2	9	11.3	8.1
2.	Immunization	26.5	70.1	54.6	68.1
3.	ANC	1.1	12.5	1.4	3.7
4.	Delivery care	0.5	4.4	1.1	3.5
5.	Delivery preparedness	0.3	1.0	0.4	0.9
6.	PNC	0.2	2.3	1.4	2.3
7.	Disease prevention	24.1	3.9	11.6	5.6
8.	Medical treatment of self	20.1	6.4	13.6	9.3
9.	Treatment of sick child	2.2	5.9	6.4	5.5
10.	Treatment of other person	4.4	0.6	2.3	1.4
11.	Malaria control	7.4	1.3	5.2	1.8
12.	Supplementary food	5.1	10.7	7.6	9.9
13.	Growth monitoring of children	2.4	7.5	7.2	7.2
14.	Early childhood care	1.1	2.4	3.0	2.0
15.	Preschool education	5.3	3.8	6.8	3.9
16.	Nutrition on health education	7.6	4.1	6.2	4.1
17.	Family life education	7.4	1.4	3.9	1.9
18.	Menstrual hygiene	6.3	0.2	1.3	0.8
19.	Others	6.8	0.9	2.7	1.6

#### 8.5. Percentage of Tobacco and Alcohol use:

	Any kind of Tobacco Use		Alcohol use	
	Women	Men	Women	Men
Urban India	6.7	49.9	0.6	30.9
Rural India	12.9	61	3.0	32.5
ST	26.3	71.2	14.1	49.9
Jharkhand	11.8	74.5	9.9	38.9

## 8.6. Percentage of households covered by any type of health insurance:

	Percentage covered
Urban India	10.4
Rural India	2.2
ST	2.6

## 9. Health Facility Indicators: (based on DLHS 3 fact sheets)

### 9.1 Primary Health Center:

Number of PHCs covered by the survey:

	Number of PHCs surveyed
State	184
Dumka (ST-44.8%)	9
Gumla (ST - 67.2%)	8

No.	Indicators	State	Dumka (ST-44.8%)	Gumla (ST - 67.2%)
1	<b>Accessibility</b>			
1.1	% of Villages with PHC within 10 KM	52.9	NA	NA
	<b>Availability</b>			
2.	% of 24/7 PHC	79.3	NA	NA
3.	<b>Staff</b>			
3.1.	% PHC with lady medical officer	50.5	55	75
3.2.	PHC with lab technician	NA	88	100
4.	<b>Infrastructure and Facilities</b>			
4.1.	% PHC with residential facilities for MO	84.2	77	100
4.2.	% PHC with at least 4 beds	89.1	NA	NA
4.3.	% PHC with separate labour room	NA	88	87
4.4.	% PHC having normal delivery kits	NA	88	100
4.5.	% PHC having newborn care services	34.2	NA	NA
4.6.	PHC having regular water supply	NA	100	100
4.7.	PHC with deep freezer	NA	33	87
5.	<b>Medical officer Training</b>			
5.1	PHC with MO who received IMNCI training in the last 5years	NA	22	12
6.	<b>NRHM related activities</b>			
6.1.	PHC prepared the PHC plan for current year	NA	66	87
6.2.	PHC that received untied fund in the previous financial year		77	100

## 9.2. Sub centre:

		Number of Sub centers surveyed		
State		783		
Dumka(ST-44.8%)		42		
Gumla(ST 67.2%)		48		
No.	Indicators	State	Dumka (ST-44.8%)	Gumla (ST 67.2%)
1.	<b>Infrastructure / Facilities</b>			
1.2.	% SC located in government building	57.5	43	81
1.3.	% SC having staff quarters for ANM	NA	26	58
1.4.	% ANM living in SC quarters/Village	52	28	46
1.5.	% with regular water supply		67	42
1.6.	% with separate labour room		14	15
2.	<b>Staff</b>			
2.1.	% SC with ANM	91.4		
2.2.	% SC with Male Health Worker	18.6	12	16
2.3.	% SC with additional ANM	42.5		
3.	<b>Supplies</b>			
3.1.	Sub-Centre having auto-disposable syringes	NA	88	100
3.2.	Sub-Centre reporting IFA tablets out of stock for more than 10 days during last one month	NA	14	8
3.3.	Sub-Centre reporting ORS packets out of stock for more than 10 days during last one month		33	8
4.	<b>Training</b>			
4.1.	% ANM who attended Skilled Birth Attendant training		45	52
4.2.	% ANM trained in integrated management of neonatal and childhood illnesses (IMNCI) in last 5 years.		36	50
4.3.	% ANM ever been trained in integrated management of neonatal and childhood illnesses (IMNCI).		40	62
5.	<b>NRHM related activity</b>			
5.1.	Sub-Centre that received untied fund in previous financial year.		76	96

### 9.3. Community Health Centre:

		Number of CHCs surveyed		
State		8		
Dumka (ST-44.8%)		0		
Gumla (ST - 67.2%)		2		
No.	Indicators	State	Dumka (ST-44.8%)	Gumla (ST-67.2%)
1.	<b>Facilities</b>			
1.1.	Having Operation Theatre %	87.5	0	100
1.2.	Having Labour Room	NA	0	100
1.3	Having large deep freezer	NA	0	100
1.4.	Having water supply for 24 hours	NA	0	100
2.	<b>Services</b>		0	
2.1.	Having Ambulance on road	NA	0	3(?)
2.2.	24 hours normal delivery services %	100	0	100
2.3.	24 hours New born care %	85.7	0	100
2.4.	Having Blood Storage Facility %	0	0	0
2.5.	Integrated Counseling and Testing Centre (ICTC)	NA	0	0
3.	<b>Staff</b>			
3.1.	Having General Surgeon	NA	0	50%
3.2.	Having Obstetrician/ Gynecologist %	62.5	0	100
4.	<b>Training</b>			
4.1.	M.O. received training for Prevention, Care and Support for HIV/AIDS during last five years	NA	0	4 MO
4.2.	M.O. received training of basic Emergency Obstetric Care during last five years	NA	0	0
4.3.	M.O. received training of Integrated Management of Neonatal and Childhood Illness during last five years	NA	0	1 MO

**9.4. Anganwadi coverage indicators: NFHS 3:**

Indicators	National			Jharkhand		
	Urban	Rural	ST	Urban	Rural	ST
% children covered by AWC	23.4	34.8	50	74	95.6	95.3
% children weighed at AWC	15.6	20.8	36	4.8	16.1	23.9
% mothers counseled after weighing their children	51.8	48.5	48	0	46.7	42.3
% pregnant women received sup. food	15.6	21.4	37	8.9	39.3	54.1
% Breastfeeding women received sup. food	12.3	17.3	32	8.1	40.9	55.4

## Annexure 8

### Health status and Health services indicators - Madhya Pradesh:

#### 1. Child Health:

##### 1.1. Mortality Indicators:

##### 1.1.1. Neonatal Mortality Rate:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	NFHS 3 (2005-06)
National Average	48.6	43.4	39
State Average		59.8	51.4
State Urban		41.9	41.2
State Rural		64.6	54.3
State ST		69.4	56.3

##### 1.1.2. Infant Mortality Rate:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	NFHS 3 (2005-06)
National Average	78.5	67.6	51.5
State Average		92.5	81.9
State Urban		59.5	71.6
State Rural		101.5	84.8
State ST		101	95.6

##### 1.1.3. Child Mortality Rate:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	NFHS 3 (2005-06)
National Average	33.4	29.3	15.8
State Average		57.6	28.6
State Urban		26.5	16.2
State Rural		66.5	32
State ST		87.4	49.9

##### 1.1.4. Under Five Mortality Rate (U5MR):

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	109.3	94.9	66.8
State Average		144.7	108.2
State Urban		84.4	86.6
State Rural		161.2	114.1
State ST		179.6	140.7

## 1.2. Nutritional status Indicators and trends:

### 1.2.1. Under weight: Weight for Age - less than -2 SD:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	42.7	39.1
State Average	-	55.1	60
State Urban	-	44.3	51.3
State Rural	-	58.4	62.7
State ST	-	64.5	71.4

### 1.2.2. Percentage of Stunting - Height for Age - less than -2SD:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	51	45.1
State Average	-	51	50
State Urban	-	39.8	44.3
State Rural	-	54.3	51.7
State ST	-	59.9	56.4

### 1.2.3. Percentage of Wasting in Children - Weight for Height - less than -2SD:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	19.7	18.8
State Average	-	19.8	35
State Urban	-	17.3	31.7
State Rural	-	20.6	36
State ST	-	24.7	41

### 1.2.4. Percentage of children with anemia - Hb <11g.:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	74.3	67.2
State Average	-	75	74.1
State Urban	-	73.7	68.9
State Rural	-	75.4	75.7
State ST	-	83.9	82.5

### 1.3. Basic child health service provision indicators:

#### 1.3.1. Percentage of children given all the basic immunizations:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	DLHS 2 (2002-2004)	NFHS 3 (2005-06)	DLHS 3 (2007-2008)
National Average	35	42	46	48.1	NA
State Average		22.4	30.2	22.6	36.2
State Urban		41.2	51	68.7	54.5
State Rural		17	22.8	31.5	31.4
State ST		11.1	15.9	22.3	NA
Mandla		NA	53.7	NA	28.9
Jhabua		NA	10.7	NA	19.4

#### 1.3.2. Percentage of children who have not received any vaccination:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	DLHS 2 (2002-2004)	NFHS 3 (2005-06)	DLHS 3 (2007-2008)
National Average	30				
State Average		13.9	17.2	5	
State Urban		5	9.1	1.1	3.7
State Rural		16.5	20.1	6.2	11.3
State ST		26.2	30.2	7.8	NA
Mandla		NA	31.1	NA	NA
Jhabua		NA	3.1	NA	NA

#### 1.3.3. Vitamin A administration:

NFHS figures for Vitamin A administration:

	Vit. A given in the last 6 months to Children aged 12 - 35 months		Vit. A given in the last 6 months to Children aged 6 - 59 months	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3
National Ave	29.7	25.1	NA	18.2
National Urban	21.2	26.9	NA	19.7
National Rural	27	24.5	NA	17.7
<b>National ST</b>	26	21.3	NA	14.8
MP Ave	14.7	20.1	NA	14.1
MP Urban	18.7	25.7	NA	14.7
MP Rural	13.5	18.2	NA	13.9
<b>MP ST</b>	11	17.9	NA	11.4

DLHS 3 figures for vitamin A administration:

	MP			Mandla	Jhabua
	Ave.	Urban	Rural		
Children (9 to 35 months) who have received at least one dose of Vitamin A:	39.5	53.8	35.9	53.1	14.6
Children >21 months who have received 3 doses of Vitamin A	NA	NA	NA	9.5	1.1

#### 1.4. Indicators of appropriateness of treatment and awareness about for some important child hood illness:

##### 1.4.1. NFHS 3:

	Indicators	National			Madhya Pradesh		
		Urban	Rural	ST	Urban	Rural	ST
1.	% children under 5 given right treatment for ARI	15.5	11.7	13	23.6	15.4	NA
2.	% children with fever receiving Treatment for Malaria	10.3	7.6	12	23.3	18.7	24.4
3.	% of children with Diarrhoea given ORS at the health facility	32.6	23.8	29	35.6	27.4	26.7
4.	% women with Knowledge about ORS	83.7	67.7	61	92.2	74.7	66

##### 1.4.2. DLHS:

No	Indicators %	State urban		State rural		Jhabua	Mandla
		DLHS 3	DLHS 2	DLHS 3	DLHS 2	DLHS 3	DLHS 3
1.	% women aware of the danger sign of ARI	72	53.9	61.5	45.6	NA	NA
2.	% children receiving ORS for diarrhoea	45.1	45.6	25.8	19.3	26	28
3.	% children receiving treatment for ARI	76.6	73.2	59.4	54.7	45.6	44.5

## 2. Maternal Health Service and Awareness indicators:

### 2.1. Antenatal Care:

#### 2.1.1. NFHS 2 and 3 figures:

Indicators	National Ave.		State Ave.		State Rural		State ST	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3
%ANC in I Trimester	33	43.9	26.1	39.3	20.7	32.5	NA	21.8
% 3 or more ANC	43.8	59.5	NA	40.7	NA	35.1	NA	25.9
% with No ANC by health professional	21.7	18.5	38.5	20.3	44.2	24.7	55.7	36.2
% with 2 or more TT	72.2	79.5	55	70.6	49.8	66.4	33.8	51.7
% who received IFA	84	64.9	78.4	62.8	79.3	59.7	81.1	53.1
% who consumed 3 months IFA	81.3	26.8	75.5	12.4	76	9.3	78	7.7

#### 2.1.2. The DLHS 2 and 3 figures:

No	Indicators %	ST	State urban		State rural		Jhabua district		Mandela district	
		DLHS 2	DLHS 2	DLHS 3	DLHS 2	DLHS 3	DLHS 2	DLHS 3	DLHS 2	DLHS 3
1.	ANC in I trimester	20.8	52.5	57.5	25.6	27.9	NA	21.7	NA	23.3
2.	Mothers with 3 or more ANC	20.1	57.8	58.3	26.5	28.2	12.7	22	26.8	23.8
3.	Mothers who received at least 1 TT	18.7	8	81.1	14.7	55.2	51.5	38.8	72.6	54.8
4.	Mothers who consumed at least 100 days of IFA	30.3	40.4	23.7	30.8	15				
5.	Mothers with Full ANC	3.6	12.7	16.8	3.5	5.7				

(Full ANC as per DLHS: At least three visits for antenatal check-up, one TT injection received and 100 IFA tablets or adequate amount of syrup consumed.)

### 2.1.3. Components of ANC in Madhya Pradesh - NFHS 3:

Components	Urban	Rural
Weighed	67.2	49.2
Blood pressure measured	65.1	31.4
Urine sample taken	64.7	26.7
Blood sample taken	66.2	34.8
Abdomen examined	78.5	64.5

### 2.1.4. Percentage receiving information on specific pregnancy complications in Madhya Pradesh- NFHS 3:

Information given	Urban	Rural
Vaginal bleeding	23.8	12.3
Convulsions	22.2	12.4
Prolonged labor	26.1	14.2
Where to go if experienced pregnancy complications	51.3	33.2

## 2.2. Delivery care:

### 2.2.1. NFHS data:

Indicators	National Ave.		State Ave.		State Rural		State ST	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3
% of institutional delivery	44.8	48.2	20.1	26.2	12.1	17.1	7.3	8
% births assisted by health personnel	53.4	55.5	29.6	32.7	20.9	23.8	13.9	12.6

(Health personnel as per NFHS 3: Doctor, auxiliary nurse midwife, nurse, midwife, lady health visitor or other health personnel.)

### 2.2.2. DLHS 3:

No	Indicators	State urban (DLHS 3)	State rural (DLHS 3)	Jhabua (DLHS 3)	Mandla (DLHS 3)
1.	% of Institutional delivery	72.2	40.8	37.6	22.4
2.	% home delivery by skilled personnel	16.6	4.4	3.3	1.7

**2.3. Postnatal care:**

**2.3.1. NFHS 2 and 3 data:**

Indicators	National Ave.		State Ave.		State Rural		State ST	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3
% PNC within 48 hours of delivery	14.2	44.5	5.1	28.5	5.1	21.1	9	12.7

**2.3.2. DLHS 3 data:**

No	Indicators %	State urban	State rural	Jhabua	Mandla
1.	PNC for mother within 2 weeks of delivery	58.3	32.5	NA	NA
2.	PNC for mother within 48 hours of delivery	NA	NA	28.9	27.1
3.	children seen within 24 hours of delivery	NA	NA	32.1	26.5
4.	children seen within 10 days of delivery	NA	NA	32.5	31.8

## 2.4. Breast feeding practices % as per the NFHS 3 and DLHS:

		NFHS 3			DLHS 3				
		Madhya Pradesh			Madhya Pradesh			Jhabua DLHS 3	Mandla DLHS 3
		Total	Rural	ST	Total	Rural	Urban		
1.	Breastfed within 1 hour of birth	15.9	13.3	11.7	43.1	42.5	45.4	45.7	58
2.	Breastfed within 1 day of birth	52.6	48.7	47.8					
3.	Prelacteal feeds	58.1	58.7	56.7					
4.	Exclusive breastfeeds for 6 months				31.1	31.2	30.4	48.6	45.4

## 2.5. Fertility Indicators:

### 2.5.1. NFHS:

Indicators	National Ave.			State Ave.			State Rural			State ST		
	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3
Crude birth rate	NA	NA	21.9	31.9	26.7	24.9		27.9	26			
Total Fertility Rate	3.39	2.85	2.5	3.90	3.31	3.12		3.56	3.34		3.69	3.82
Teenage pregnancy	NA	NA	19.9			13.6			16.2			16.5
% of birth order of >4	30.9	27.5	22.2		35	30.9		36.8	33.5		42.6	45

### 2.5.2. DLHS 3 (Marriage and fertility):

No	Indicators %	State urban	State rural	Jhabua	Mandla
1.	Teenage marriage(girls) before 18 years	33.5	58.5	36.5	18.5
2.	Teenage births out of total births	2.1	5.9	18.6	11.9
3.	Birth order of 2 and more in women 20 - 24 years of age	37.7	46	76.8	52.3

## 2.6. Family planning indicators:

### 2.6.1. NFHS:

No	Indicators	National					Madhya Pradesh				
		NFHS 3			NFHS 2	NFHS 1	NFHS 3			NFHS 2	NFHS 1
		Urban	Rural	ST			Urban	Rural	ST		
1.	Knowledge of condom/Nirodh use-Men	97.6	90.3				98.8	91.9			
2.	Knowledge of condom/Nirodh use-Women	84.9	68.4		76.1	71	93.2	77.4			
3.	Current contraceptive( modern) use women	55.8	45.3	43			56.3	51.5	45.4	55.5(U) 39.3(R) 31.1(ST)	
4.	Current use of condom /Nirodh	9.8	3.2	1.7	3.1	2.4	12.6	2	0.4	8.1(U) 1.1(R) 0.4(ST)	
5.	Source of female sterilization-Govt.	74.2	87.7				88.4	98.1		84.7(U) 97.2(R)	
6.	Source of female sterilization-Private	24.3	11.4				10.6	1.8		12.5(U) 2.2(R)	
7.	Source for condoms - Govt	8.4	20				9.7	40		8.9(U) 28.5(R)	
8.	Source for condoms - Private+Shops	52.1	37.5				63	38		83(U) 63.4(R)	
9.	Source for pills-Govt	10.4	18.2				23.6	28		28.9(U) 39.9(R)	
10.	Source for pills-Private+Shop	72.9	58				72.5	60		30.7(U) 48.1(R)	
11.	Unmet need for FP	9.7	14.1	14			72	65.5	60	70.6(U) 57.1(R) 47.4(ST)	

### 2.6.2. DLHS:

	DLHS 3					DLHS 2				
	Rural	Urban	ST	Jhabua	Mandla	Rural	Urban	ST	Jhabua	Mandla
Unmet need for FP %	19.9	17.9	NA	30.7	15	22.6	17.5	24.6	28.8	16.4

### 3. Adult health indicators:

Indicators	National			Madhya Pradesh		
	Urban	Rural	ST	Urban	Rural	ST
% women with BMI <18.5	25	40.6	47	32.5	45.4	49.8
% Men with BMI <18.5	26.5	38.8	41	33	45.4	45.7
% Women with Anemia	50.9	57.4	69	46.9	59.6	73.9
% Men with Anemia	17.7	27.7	40	18.1	29	41.8

### 4. Indicators of HIV knowledge and Prevalence:

#### 4.1. NFHS 3:

	Indicators	National			Madhya Pradesh		
		Urban	Rural	ST	Urban	Rural	ST
1	% Women with comprehensive knowledge about HIV	30.3	11	8.1	40.2	12.4	7.3
2	% Men with comprehensive knowledge about HIV	46.6	25.1	20	62.7	28.1	22.5

(Respondents with comprehensive knowledge say that the use of a condom for every act of sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting HIV/AIDS, say that a healthy-looking person can have HIV/AIDS, and reject the two most common misconceptions in NFHS-3, namely that HIV/AIDS can be transmitted by mosquito bites and by sharing food.)

#### 4.2. DLHS 3:

No	Indicators	State urban	State rural	Jhabua DLHS 3	Mandla DLHS 3
1.	% unmarried women 15 to 24 years who have heard of HIV/AIDS	65.3	23.9	8.3	18.5
2.	% ever married women 15 to 49 years who have heard of HIV/AIDS	81.6	49.1	23	50.3

#### 4.3. Prevalence of HIV (NFHS 3):

	Men			Women			Total
	Urban	Rural	Total	Urban	Rural	Total	
National	0.41	0.32	0.36	0.29	0.18	0.23	0.28
Madhya Pradesh			0.16			0.08	0.12

## 5. Performance indicators for RNTCP:

### 5.1 Annual report of RNTCP - 2008-2009:

Place	Annual NSP case detection rate %	Cure rate of NSP cases %	Default of NSP cases %	Default of Retreatment cases %
Madhya Pradesh	54	82.5	6.9	16.2
Jhabua	57	90	NA	NA
Mandala	78	88	NA	NA
ST Districts	82	85		
India Total	72	84	6	14.9
Target	70	85		

### 5.2. Knowledge about TB in ST - NFHS 3:

% of people who	India	Madhya Pradesh		ST	
		Women	Men	Women	Men
Have heard of TB	85.3	86	95.6	75.4	91.4
Have misconceptions about spread of TB	51.3	68.5	75.9	63.8	82.2
Know that it spreads through cough/Sneeze	50.1	54.4	50.2	45.1	45.4
Believe that TB can be cured	78.6	82.6	85.4	70.7	72.2
Want to keep it a secret	16.7	13	18.1	14.4	26.6

### 5.3. DLHS 3 (2007-2008):

83.1% of urban population and 62.2% of rural population are aware of the DOTS program in Madhya Pradesh.

Data on awareness in the ST is not available.

## 6. Performance indicators for Leprosy, Malaria:

### 6.1. Leprosy:

Karnataka State	Leprosy as on March 2008	
Total no of districts 48	<1/10,000 cases in 39	>1/10,000 cases in 9

### 6.2. Malaria:

Malaria		PF cases		Deaths	
2007	2008	2007	2008	2007	2008
90,829	99408	36694	38632	41	0

## 7. Indicators for Non communicable illnesses:

	Diabetes		Asthma		Thyroid disorder	
	Women	Men	Women	Men	Women	Men
Urban India	1374	1383	1648	1329	1339	369
Rural India	641	860	1719	1797	758	392
ST	349	477	1749	1973	753	567
Lowest WI	371	705	1723	2416	529	384
Highest WI	1503	1957	1639	1248	1739	454
Madhya Pradesh Urban	1379	239	1132	1611	542	397
Madhya Pradesh Rural	229	698	1343	873	622	436

## 8. Other indicators that contribute to the Health status:

### 8.1 Source of Health care:

	India		Madhya Pradesh	
	Government	Private	Government	Private
Urban	29.6	69.5	38.2	59.9
Rural	36.8	62.5	37.1	62.7
Lowest WI (WI - 1)	39.4	59.9	41.1	58.7
WI - 2	37.1	62.2	37.5	62.1
ST	NA	NA	NA	NA

### 8.2. Contact with health worker:

Percentage with any contact with HW in the past 3 months:

	ANM/LVH	AWW	ASHA	MPW	Any HW
Urban India	6.8	4.1	0	0.7	10
Rural India	14.2	12.3	0.1	0.7	20.8
ST	12.5	13.5	0.1	1.2	19.8

### 8.3. Place of Meeting the HW:

	Home	AWC
Urban India	62.7	20.1
Rural India	66	30.8
ST	56.3	44.5

#### 8.4. Topics discussed during the meeting with the HW:

	Topics discussed	Never married	Pregnant	Non pregnant women	
				Current Contraceptive users	Current Contraceptive non users
1.	Family planning	2.2	9	11.3	8.1
2.	Immunization	26.5	70.1	54.6	68.1
3.	ANC	1.1	12.5	1.4	3.7
4.	Delivery care	0.5	4.4	1.1	3.5
5.	Delivery preparedness	0.3	1.0	0.4	0.9
6.	PNC	0.2	2.3	1.4	2.3
7.	Disease prevention	24.1	3.9	11.6	5.6
8.	Medical treatment of self	20.1	6.4	13.6	9.3
9.	Treatment of sick child	2.2	5.9	6.4	5.5
10.	Treatment of other person	4.4	0.6	2.3	1.4
11.	Malaria control	7.4	1.3	5.2	1.8
12.	Supplementary food	5.1	10.7	7.6	9.9
13.	Growth monitoring of children	2.4	7.5	7.2	7.2
14.	Early childhood care	1.1	2.4	3.0	2.0
15.	Preschool education	5.3	3.8	6.8	3.9
16.	Nutrition on health education	7.6	4.1	6.2	4.1
17.	Family life education	7.4	1.4	3.9	1.9
18.	Menstrual hygiene	6.3	0.2	1.3	0.8
19.	Others	6.8	0.9	2.7	1.6

#### 8.5. Percentage of Tobacco and Alcohol use:

	Any kind of Tobacco Use		Alcohol use	
	Women	Men	Women	Men
Urban India	6.7	49.9	0.6	30.9
Rural India	12.9	61	3.0	32.5
ST	26.3	71.2	14.1	49.9
Madhya Pradesh	16	68.5	2	31

### 8.6. Percentage of households covered by any type of health insurance:

	Percentage covered
Urban India	10.4
Rural India	2.2
ST	2.6

### 9. Health Facility Indicators: (based on DLHS 3 fact sheets)

#### 9.1. Primary Health Center:

Number of PHCs covered by the survey:

	Number of PHCs surveyed
State	476
Jhabua	11
Mandla	21

No.	Indicators	State	Jhabua	Mandla
1	<b>Accessibility</b>			
1.1	% of Villages with PHC within 10 KM	55.6	NA	NA
	<b>Availability</b>			
2.	% of 24/7 PHC	73.1	NA	NA
3.	<b>Staff</b>			
3.1.	% PHC with lady medical officer	13.5	1/11	1/21
3.2.	PHC with lab technician	NA	8/11	4/21
4.	<b>Infrastructure and Facilities</b>			
4.1.	% PHC with residential facilities for MO	63.5	10/11	13/21
4.2.	% PHC with at least 4 beds	66.6	NA	NA
4.3.	% PHC with separate labor room	NA	11/11	18/21
4.4.	% PHC having normal delivery kits	NA	9/11	21/21
4.5.	% PHC having newborn care services	32.3	3/11	0/21
4.6.	PHC having regular water supply	NA	10/11	14/21
4.7.	PHC with deep freezer	NA	8/11	6/21
5.	<b>Medical officer Training</b>			
5.1	PHC with MO who received IMNCI training in the last 5years		4/11	4/11
6.	<b>NRHM related activities</b>			
6.1.	PHC prepared the PHC plan for current year		8/11	18/21
6.2.	PHC that received untied fund in the previous financial year		10/11	20/21

## 9.2. Sub centre:

	Number of Sub centers surveyed
State	1362
Jhabua	31
Mandla	39

No.	Indicators	State	Jhabua	Mandla
1.	<b>Infrastructure / Facilities</b>			
1.2.	% SC located in government building	55.6	23/31	20/39
1.3.	% SC having staff quarters for ANM		20/31	24/39
1.4.	% ANM living in SC quarters/Village	48.5	1/31	5/39
1.5.	% with regular water supply		29/31	36/39
1.6.	% with separate labor room		18/31	15/39
2.	<b>Staff</b>			
2.1.	% SC with ANM	90.2		
2.2.	% SC with Male Health Worker	58.5	8/31	19/39
2.3.	% SC with additional ANM	8.2		
3.	<b>Supplies</b>			
3.1.	Sub-Centre having auto-disposable syringes		31/31	37/39
3.2.	Sub-Centre reporting IFA tablets out of stock for more than 10 days during last one month		12/31	15/39
3.3.	Sub-Centre reporting ORS packets out of stock for more than 10 days during last one month		14/31	16/39
4.	<b>Training</b>			
4.1.	% ANM who attended Skilled Birth Attendant training		10/31	17/39
4.2.	% ANM trained in integrated management of neonatal and childhood illnesses (IMNCI) in last 5 years.		8/31	17/39
4.3.	% ANM ever been trained in integrated management of neonatal and childhood illnesses (IMNCI).		0/31	2/39
5.	<b>NRHM related activity</b>			
5.1.	Sub-Centre that received untied fund in previous financial year.		26/31	37/39

### 9.3. Community Health Centre:

	Number of CHCs surveyed
State	259
Jhabua	8
Mandla	8

No.	Indicators	State	Jhabua	Mandla
1.	<b>Facilities</b>			
1.1.	Having Operation Theatre %	70.7	8/8	8/8
1.2.	Having Labor Room		8/8	8/8
1.3.	Having large deep freezer		5/8	6/8
1.4.	Having water supply for 24 hours		8/8	7/8
2.	<b>Services</b>			
2.1.	Having Ambulance on road		7/8	8/8
2.2.	24 hours normal delivery services %	99.6	8/8	8/8
2.3.	24 hours New born care %	86.2	6/8	8/8
2.4.	Having Blood Storage Facility %	6.3	0/8	0/8
2.5.	Integrated Counseling and Testing Centre (ICTC)		2/8	0/8
3.	<b>Staff</b>			
3.1.	Having General Surgeon		2/8	7/8
3.2.	Having Obstetrician/ Gynecologist %	20.8	1/8	2/8
4.	<b>Training</b>			
4.1.	M.O. received training for Prevention, Care and Support for HIV/AIDS during last five years		4/8	12/8
4.2.	M.O. received training of basic Emergency Obstetric Care during last five years		6/8	5/8
4.3.	M.O. received training of Integrated Management of Neonatal and Childhood Illness during last five years		3/8	7/8

### 9.4. Anganwadi coverage indicators: NFHS 3:

Indicators	National			Madhya Pradesh		
	Urban	Rural	ST	Urban	Rural	ST
% children covered by AWC	23.4	34.8	50	45.6	90	79.1
% children weighed at AWC	15.6	20.8	36	39.4	39	43
% mothers counseled after weighing their children	51.8	48.5	48	63.1	61.6	64.4
% pregnant women received sup. food at AWC	15.6	21.4	37	28.1	31.4	34.3
% Breastfeeding women received sup. food at AWC	12.3	17.3	32	28.1	26.7	27.9

## Annexure 9

### Health status and Health services indicators of Maharashtra:

#### 1. Child Health:

##### 1.1. Mortality Indicators:

##### 1.1.1. Neonatal Mortality Rate:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	NFHS 3 (2005-06)
National Average	48.6	43.4	39
State Average	36.4	38.1	31.8
State Urban	23.7	24.7	18.9
State Rural	44.1	36.7	42.7
State ST	NA	49.8	32.5

##### 1.1.2. Infant Mortality Rate:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	NFHS 3 (2005-06)
National Average	78.5	67.6	51.5
State Average	50.5	53.2	45.3
State Urban	33.3	34.7	28.4
State Rural	60.8	64.5	59.5
State ST	NA	73.6	51.4

##### 1.1.3. Child Mortality Rate:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	NFHS 3 (2005-06)
National Average	33.4	29.3	15.8
State Average	20.9	15	9.5
State Urban	19.8	10.2	10.1
State Rural	21.6	18	9
State ST	NA	20.2	19.4

##### 1.1.4. Under Five Mortality Rate (U5MR):

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	109.3	94.9	66.8
State Average	70.3	69.9	53.4
State Urban	52.4	44.6	36.9
State Rural	81.1	85.2	67.2
State ST	NA	92.3	69.8

## 1.2. Nutritional status Indicators and trends:

### 1.2.1. Under weight: Weight for Age - less than -2 SD:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	42.7	39.1
State Average	-	49.6	37
State Urban	-	44.1	30.7
State Rural	-	53.2	41.6
State ST	-	65.2	53.2

### 1.2.2. Percentage of Stunting - Height for Age - less than -2SD:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	51	45.1
State Average	-	39.9	46.3
State Urban	-	33.3	42.3
State Rural	-	44.2	49.1
State ST	-	57.1	57.8

### 1.2.3. Percentage of Wasting in Children - Weight for Height - less than -2SD:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	19.7	18.8
State Average	-	21.2	16.5
State Urban	-	15.7	14.1
State Rural	-	24.8	18.2
State ST	-	31	18.9

### 1.2.4. Percentage of children with anemia - Hb <11g.:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	74.3	67.2
State Average	-	76	63.4
State Urban	-	72.8	58.7
State Rural	-	78	66.8
State ST	-	83.2	67.6

### 1.3. Basic child health service provision indicators:

#### 1.3.1. Percentage of children given all the basic immunizations:

	NFHS 1(1991-92)	NFHS 2 (1997-98)	DLHS 2 (2002-2004)	NFHS 3 (2005-06)	DLHS 3 (2007-2008)
National Average	35	42	46	48.1	NA
State Average	64.1	78.4	70.9	58.8	74
State Urban	NA	80.9	70.3	68	74.3
State Rural	NA	76.8	71.2	49.8	73.8
State ST	NA	62.2	65.5	39.3	NA
Raighad	NA	NA	91.9	NA	NA
Yawatmal	NA	NA	72.6	NA	NA

#### 1.3.2. Percentage of children who have not received any immunization:

	NFHS 1(1991-92)	NFHS 2 (1997-98)	DLHS 2 (2002-2004)	NFHS 3 (2005-06)	DLHS 3 (2007-2008)
National Average	30				
State Average	7.5	2	2.2	2.8	1.2
State Urban	NA	0	2.3	0.5	1.5
State Rural	NA	3.2	2.1	5	1.1
State ST	NA	9.6	3.7	14	NA
Raighad	NA	NA	1.1	NA	NA
Yawatmal	NA	NA	2.5	NA	NA

#### 1.3.3. Vitamin A administration:

NFHS figures for Vitamin A administration:

	Vit. A given in the last 6 months to Children aged 12 - 35 months		Vit. A given in the last 6 months to Children aged 6 - 59 months	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3
National Ave	29.7	25.1	NA	18.2
National Urban	21.2	26.9	NA	19.7
National Rural	27	24.5	NA	17.7
<b>National ST</b>	26	21.3	NA	14.8
Maharashtra Ave	36.6	37.6	NA	25.1
Maharashtra Urban	32.7	39	NA	28
Maharashtra Rural	39	36.4	NA	22.7
<b>Maharashtra ST</b>	26	34.3	NA	21.6

DLHS 3 figures for vitamin A administration:

	Maharashtra			Raighad	Yawatmal
	Ave.	Urban	Rural		
Children (9 to 35 months) who have received at least one dose of Vitamin A:	77.8	79.4	77.1	NA	NA
Children >21 months who have received 3 doses of Vitamin A	NA	NA	NA	NA	NA

#### 1.4. Indicators of appropriateness of treatment and awareness about for some important child hood illness:

##### 1.4.1. NFHS 3:

	Indicators	National			Maharashtra		
		Urban	Rural	ST	Urban	Rural	ST
1.	% children under 5 given right treatment for ARI	15.5	11.7	13	29.6	18.7	NA
2.	% children with fever receiving Treatment for Malaria	10.3	7.6	12	21.5	26.9	26.5
3.	% of children with Diarrhoea given ORS at the health facility	32.6	23.8	29	38.9	38.2	75.1
4.	% women with Knowledge about ORS	83.7	67.7	61	82	64.7	54.9

##### 1.4.2. DLHS:

No	Indicators %	State urban		State rural		Raighad	Yawtmal
		DLHS 3	DLHS 2	DLHS 3	DLHS 2	DLHS 2	DLHS 2
1.	% women aware of the danger sign of ARI	37.5	33.3	25.7	30.1	19	52.7
2.	% children receiving ORS for diarrhoea	48.4	47.6	42.7	39.8	NA	NA
3.	% children receiving treatment for ARI	86.8	82.2	79	76.2	NA	NA

## 2. Maternal Health Service and Awareness indicators:

### 2.1. Antenatal Care:

#### 2.1.1. NFHS 2 and 3 figures:

Indicators	National Ave.		State Ave.		State Rural		State ST	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3
%ANC in I Trimester	33	43.9	46.7	62.1	40.7	54.7	NA	40
% 3 or more ANC	43.8	59.5	65.4	75.1	55.2	63.6	NA	44.5
% with No ANC by health professional	21.7	18.5	9.6	7.3	12.5	11.2	25.2	16.2
% with 2 or more TT	72.2	79.5	74.9	85.1	72	82.4	51.5	75.9
% who received IFA	84	64.9	84.4	80.9	80.4	81.9	87.8	76.5
% who consumed 3 months IFA	81.3	26.8	81.2	31.4	80.7	30.8	77.2	22.4

#### 2.1.2. The DLHS 2 and 3 figures:

No	Indicators %	State urban		State rural		Raighad		Yawatmal	
		DLHS 2	DLHS 3	DLHS 2	DLHS 3	DLHS 2	DLHS 3	DLHS 2	DLHS 3
1.	ANC in I trimester	61	70.9	46.9	57.9	65.8	NA	60.8	NA
2.	Mothers with 3 or more ANC	82.5	84.3	62.4	70.6	87	NA	68.7	NA
3.	Mothers who received at least 1 TT	93.4	94.7	84.7	87.6	94.1	NA	93	NA
4.	Mothers who consumed at least 100 days of IFA	27.9	40.9	27.6	41.2	17.9	NA	20.6	NA
5.	Mothers with Full ANC	24.8	36.4	21.3	32.1	17.9	NA	17.7	NA

(Full ANC as per DLHS: At least three visits for antenatal check-up, one TT injection received and 100 IFA tablets or adequate amount of syrup consumed.)

### 2.1.3. Components of ANC in MH - NFHS 3:

Components	Urban	Rural
Weighed	95	85.9
Blood pressure measured	94.6	80.4
Urine sample taken	92	75.1
Blood sample taken	92.5	77.2
Abdomen examined	94.1	82.7

## 2.1.4. Percentage receiving information on specific pregnancy complications- NFHS

3:

Information given	Urban	Rural
Vaginal bleeding	22.9	13.8
Convulsions	19.7	11.6
Prolonged labour	23.4	13.5
Where to go if experienced pregnancy complications	47.8	41.3

## 2.2. Delivery care:

### 2.2.1. NFHS data:

Indicators	National Ave.		State Ave.		State Rural		State ST	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3
% of institutional delivery	44.8	48.2	52.6	64.6	34.5	48.9	32.2	24.2
% births assisted by health personnel	53.4	55.5	59.5	68.7	43.6	54.6	36.9	32

(Health personnel as per NFHS 3: Doctor, auxiliary nurse midwife, nurse, midwife, lady health visitor or other health personnel.)

### 2.2.2. DLHS 2 and 3:

No	Indicators	State urban(DLHS 3)	State rural(DLHS 3)	Raighad (DLHS 2)	Yawatmal (DLHS 2)
1.	% of Institutional delivery	87.3	54.1	63.4	53.1
2.	% home delivery by skilled personnel	21	15.4	6.7	6

## 2.3. Postnatal care:

### 2.3.1. NFHS 2 and 3 data:

Indicators	National Ave.		State Ave.		State Rural		State ST	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3
% PNC within 48 hours of delivery	14.2	44.5	23.3	58.7	22.2	48.4	NA	34.7

**2.3.2. DLHS 3 data:**

No	Indicators %	State urban	State rural	Raighad	Yawatmal
1.	PNC for mother within 2 weeks of delivery	89.1	76	NA	NA
2..	PNC for mother within 48 hours of delivery	NA	NA	NA	NA
3.	children seen within 24 hours of delivery	NA	NA	NA	NA
4.	children seen within 10 days of delivery	NA	NA	NA	NA

## 2.4. Breast feeding practices % (In the tribal areas as per the NFHS 3 and DLHS):

		NFHS 3			DLHS 3				
		MH State			MH State			Raighad DLHS 2	Yawat mal DLHS 2
		Total	Rural	ST	Total	Rural	Urban		
1.	Breastfed within 1 hour of birth	52	52.5	39.7	53.3	53.4	53		
2.	Breastfed within 1 day of birth	78.4	77.5	66.9	NA	NA	NA		
3.	Prelacteal feeds	32.3	30.7	30.5	NA	NA	NA		
4.	Exclusive breastfeeds for 6 months	53	NA	NA	33.6	34.5	31	1.8	11.5

## 2.5. Fertility Indicators:

### 2.5.1. NFHS:

Indicators	National Ave.			State Ave.			State Rural			State ST		
	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3
Crude birth rate	NA	NA	21.9	26.7	23	18.8	8.4	23.8	19.3	NA	NA	NA
Total Fertility Rate	3.39	2.85	2.5	2.86	2.52	2.11	3.12	2.74	2.13	NA	2.93	2.43
Teenage pregnancy	NA	NA	19.9	NA	NA	13.8	NA	NA	18.2	NA	NA	23.1
% of birth order of >4	30.9	27.5	22.2	22.8	18	11.6	NA	20.1	12.4	NA	22.9	18.4

### 2.5.2. DLHS 3 (Marriage and fertility):

No	Indicators %	State urban	State rural	Raighad	Yawatmal
1.	Teenage marriage(girls) before 18 years	12.2	20.8	NA	NA
2.	Teenage births out of total births	4.9	10.4	NA	NA
3.	Birth order of 2 and more in women 20 - 24 years of age	42.3	48.1	NA	NA

## 2.6. Family planning indicators:

### 2.6.1. NFHS:

No	Indicators	National					Maharashtra				
		NFHS 3			NFHS 2	NFHS 1	NFHS 3			NFHS 2	NFHS 1
		Urban	Rural	ST			Urban	Rural	ST		
1.	Knowledge of condom/Nirodh use-Men	97.6	90.3				97.8	89.7			
2.	Knowledge of condom/Nirodh use-Women	84.9	68.4		76.1	71	83.3	54.7			
3.	Current contraceptive(modern ) use women	55.8	45.3	43			64	65.8	62.1		
4.	Current use of condom/Nirodh	9.8	3.2	1.7	3.1	2.4	9.8	2.9	2.6		
5.	Source of female sterilization-Govt.	74.2	87.7				67.6	87.8			
6.	Source of female sterilization-Private	24.3	11.4				31.1	10.8			
7.	Source for condoms - Govt	8.4	20				10.5	18.6			
8.	Source for condoms - Private+Shops	52.1	37.5				74.6	62.8			
9.	Source for pills-Govt	10.4	18.2				8.2	33.3			
10.	Source for pills-Private+Shops	72.9	58				84.3	63			
11.	Unmet need for FP	9.7	14.1	14			9.8	9	11.2		

### 2.6.2. DLHS:

	DLHS 3					DLHS 2				
	Rural	Urban	ST	Raighad	Yawatmal	Rural	Urban	ST	Raighad	Yawatmal
Unmet need for FP %	15.2	16.8	NA	NA	NA	12.4	13.1	10.8	12.5	10.2

## 3. Adult health indicators:

Indicators	National			Maharashtra		
	Urban	Rural	ST	Urban	Rural	ST
% women with BMI <18.5	25	40.6	47	26.6	45.6	51.6
% Men with BMI <18.5	26.5	38.8	41	27.7	39.8	44.2
% Women with Anemia	50.9	57.4	69	46	50.6	58.9
% Men with Anemia	17.7	27.7	40	15.4	18.3	24.5

#### 4. Indicators of HIV knowledge and Prevalence:

##### 4.1. NFHS 3:

	Indicators	National			Maharashtra		
		Urban	Rural	ST	Urban	Rural	ST
1.	% Women with comprehensive knowledge about HIV	30.3	11	8.1	40.1	18.6	13.7
2.	% Men with comprehensive knowledge about HIV	46.6	25.1	20	60.6	43.1	32.7

(Respondents with comprehensive knowledge say that the use of a condom for every act of sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting HIV/AIDS, say that a healthy-looking person can have HIV/AIDS, and reject the two most common misconceptions in NFHS-3, namely that HIV/AIDS can be transmitted by mosquito bites and by sharing food.)

##### 4.2. DLHS 3:

No	Indicators	State urban	State rural	Raighad DLHS 2	Yawatmal DLHS 2
1.	% unmarried women 15 to 24 years who have heard of HIV/AIDS	90.1	80.1	NA	NA
2.	% ever married women 15 to 49 years who have heard of HIV/AIDS	87.8	64.3	70.3	72.7

##### 4.3. Prevalence of HIV:

	Men			Women			Total
	Urban	Rural	Total	Urban	Rural	Total	
National	0.41	0.32	0.36	0.29	0.18	0.23	0.28
Maharashtra			0.77			0.48	0.62

#### 5. Performance indicators for RNTCP:

##### 5.1. Annual report of RNTCP - 2008-2009:

Place	Annual NSP case detection rate %	Cure rate of NSP cases %	Default of NSP cases %	Default of Retreatment cases %
Maharashtra	61	84	5.6	18.1
Raighad	62	81		
Yawatmal	60	84		
ST Districts	82	85		
India Total	72	84	6	14.9
Target	70	85		

## 5.2. Knowledge about TB in ST - NFHS 3:

% of people who	India	Maharashtra		ST	
		Women	Men	Women	Men
Have heard of TB	85.3	85.6	92.2	64.4	83.1
Have misconceptions about spread of TB	51.3	37	38.7	36.9	33.6
Know that it spreads through cough/Sneeze	50.1	67	67.7	52.3	52.2
Believe that TB can be cured	78.6	80	87	65.5	71.2
Want to keep it a secret	16.7	13.6	8	11.8	8.2

## 5.3. DLHS 3 (2007-2008):

Awareness about the DOTS program is 61.4% in Maharashtra with 55.9% rural and 74% urban figures. ST figures are not available.

## 6. Performance indicators for Leprosy, Malaria:

### 6.1. Leprosy:

Maharashtra State	Leprosy as on March 2008	
	<1/10,000 cases in	>1/10,000 cases in
Total no of districts 34	27	7

### 6.2. Malaria:

Malaria					
Total cases		PF cases		Deaths	
2007	2008	2007	2008	2007	2008
67,850	61,267	22,691	18,961	182	150

## 7. Indicators for Non communicable illnesses:

	Diabetes		Asthma		Thyroid disorder	
	Women	Men	Women	Men	Women	Men
Urban India	1374	1383	1648	1329	1339	369
Rural India	641	860	1719	1797	758	392
ST	349	477	1749	1973	753	567
Lowest WI	371	705	1723	2416	529	384
Highest WI	1503	1957	1639	1248	1739	454
Maharashtra Urban	576	1316	1503	1869	758	227
Maharashtra Rural	379	428	1932	1839	417	171

## 8. Other indicators that contribute to the Health status:

### 8.1 Source of Health care:

	India		Maharashtra	
	Government	Private	Government	Private
Urban	29.6	69.5	22	77.1
Rural	36.8	62.5	36.8	62.7
Lowest WI (WI - 1)	39.4	59.9	47.3	51.6
WI - 2	37.1	62.2	39.6	60
ST	NA	NA	NA	NA

### 8.2. Contact with health worker:

Percentage with any contact with HW in the past 3 months:

	ANM/LV H	AWW	ASHA	MPW	Any HW
Urban India	6.8	4.1	0	0.7	10
Rural India	14.2	12.3	0.1	0.7	20.8
ST	12.5	13.5	0.1	1.2	19.8

### 8.3. Place of Meeting the HW:

	Home	AWC
Urban India	62.7	20.1
Rural India	66	30.8
ST	56.3	44.5

### 8.4. Topics discussed during the meeting with the HW:

	Topics discussed	Never married	Pregnant	Non pregnant women	
				Current Contraceptive users	Current Contraceptive non users
1.	Family planning	2.2	9	11.3	8.1
2.	Immunization	26.5	70.1	54.6	68.1
3.	ANC	1.1	12.5	1.4	3.7
4.	Delivery care	0.5	4.4	1.1	3.5
5.	Delivery preparedness	0.3	1.0	0.4	0.9
6.	PNC	0.2	2.3	1.4	2.3
7.	Disease prevention	24.1	3.9	11.6	5.6
8.	Medical treatment of self	20.1	6.4	13.6	9.3
9	Treatment of sick	2.2	5.9	6.4	5.5

	child				
10.	Treatment of other person	4.4	0.6	2.3	1.4
11.	Malaria control	7.4	1.3	5.2	1.8
12.	Supplementary food	5.1	10.7	7.6	9.9
13.	Growth monitoring of children	2.4	7.5	7.2	7.2
14.	Early childhood care	1.1	2.4	3.0	2.0
15.	Preschool education	5.3	3.8	6.8	3.9
16.	Nutrition on health education	7.6	4.1	6.2	4.1
17.	Family life education	7.4	1.4	3.9	1.9
18.	Menstrual hygiene	6.3	0.2	1.3	0.8
19.	Others	6.8	0.9	2.7	1.6

#### 8.5. Percentage of Tobacco and Alcohol use:

	Any kind of Tobacco Use		Alcohol use	
	Women	Men	Women	Men
Urban India	6.7	49.9	0.6	30.9
Rural India	12.9	61	3.0	32.5
ST	26.3	71.2	14.1	49.9
Maharashtra	11.1	56	0.4	24

#### 8.6. Percentage of households covered by any type of health insurance:

	Percentage covered
Urban India	10.4
Rural India	2.2
ST	2.6

## 9. Health Facility Indicators: (based on DLHS 3 fact sheets)

### 9.1 Primary Health Center:

Number of PHCs covered by the survey:

	Number of PHCs surveyed
State	830
Raighad	NA
Yawatmal	NA

No.	Indicators	State	Raighad	Yawatmal
1	<b>Accessibility</b>			
1.1	% of Villages with PHC within 10 KM	64.9%		
	<b>Availability</b>			
2.	% of 24/7 PHC	78.1		
3.	<b>Staff</b>			
3.1.	% PHC with lady medical officer	30.8		
3.2.	PHC with lab technician			
4.	<b>Infrastructure and Facilities</b>			
4.1.	% PHC with residential facilities for MO	81.3		
4.2.	% PHC with at least 4 beds	89.7		
4.3.	% PHC with separate labour room			
4.4.	% PHC having normal delivery kits			
4.5.	% PHC having newborn care services	45.1		
4.6.	PHC having regular water supply			
4.7.	PHC with deep freezer			
5.	<b>Medical officer Training</b>			
5.1	PHC with MO who received IMNCI training in the last 5years			
6.	<b>NRHM related activities</b>			
6.1.	PHC prepared the PHC plan for current year			
6.2.	PHC that received untied fund in the previous financial year			

### 9.2 Sub centre:

	Number of Sub centers surveyed
State	1058
Raighad	NA
Yawatmal	NA

No.	Indicators	State	Raighad	Yawatmal
1.	<b>Infrastructure / Facilities</b>			
1.2.	% SC located in government building	70		
1.3.	% SC having staff quarters for ANM			
1.4.	% ANM living in SC quarters/Village	64.1		
1.5.	% with regular water supply			
1.6.	% with separate labour room			
2.	<b>Staff</b>			
2.1.	% SC with ANM	93		
2.2.	% SC with Male Health Worker	76.6		
2.3.	% SC with additional ANM	30.7		
3.	<b>Supplies</b>			
3.1.	Sub-Centre having auto-disposable syringes			
3.2.	Sub-Centre reporting IFA tablets out of stock for more than 10 days during last one month			
3.3.	Sub-Centre reporting ORS packets out of stock for more than 10 days during last one month			
4.	<b>Training</b>			
4.1.	% ANM who attended Skilled Birth Attendant training			
4.2.	% ANM trained in integrated management of neonatal and childhood illnesses (IMNCI) in last 5 years.			
4.3.	% ANM ever been trained in integrated management of neonatal and childhood illnesses (IMNCI).			
5.	<b>NRHM related activity</b>			
5.1.	Sub-Centre that received untied fund in previous financial year.			

### 9.3. Community Health Centre:

	Number of CHCs surveyed
State	293
Raighad	NA
Yawatmal	NA

No.	Indicators	State	Raighad	Yawatmal
1.	<b>Facilities</b>			
1.1.	Having Operation Theatre %	84.6		
1.2.	Having Labour Room			
1.3.	Having large deep freezer			
1.4.	Having water supply for 24 hours			
2.	<b>Services</b>			
2.1.	Having Ambulance on road			
2.2.	24 hours normal delivery services %	95.9		
2.3.	24 hours New born care %	83.7		
2.4.	Having Blood Storage Facility %	11.6		
2.5.	Integrated Counseling and Testing Centre (ICTC)			
3.	<b>Staff</b>			
3.1.	Having General Surgeon			
3.2.	Having Obstetrician/ Gynecologist %	49.5		
4.	<b>Training</b>			
4.1.	M.O. received training for Prevention, Care and Support for HIV/AIDS during last five years			
4.2.	M.O. received training of basic Emergency Obstetric Care during last five years			
4.3.	M.O. received training of Integrated Management of Neonatal and Childhood Illness during last five years			

#### 9.4 .Anganwadi coverage indicators: NFHS 3:

Indicators	National			Maharashtra		
	Urban	Rural	ST	Urban	Rural	ST
% children covered by AWC	23.4	34.8	50	47.8	97.9	90.7
% children weighed at AWC	15.6	20.8	36	18.1	45.4	54.7
% mothers counseled after weighing their children	51.8	48.5	48	21.8	43.2	46.2
% pregnant women received sup. food at AWC	15.6	21.4	37	9.9	32.5	32.4
% Breastfeeding women received sup. food at AWC	12.3	17.3	32	6.2	22.3	26.6

## Annexure 10

### Health Status and health services Indicators- Orissa

#### 1. Child Health:

##### 1.1. Mortality indicators and the trend:

###### 1.1.1. Neonatal mortality Rate:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	NFHS 3 (2005-06)
National Average	48.6	43.4	39
State Average	55.2	55.6	39.5
State Rural	68	55.7	49.1
State ST	NA	56.1	54

###### 1.1.2. Infant Mortality Rate:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	NFHS 3 (2005-06)
National Average	78.5	67.6	51.5
State Average	100.7	84.4	56.5
State Rural	116.7	90.9	72.2
State ST		98.7	78.7

###### 1.1.3. Child mortality rate:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	NFHS 3 (2005-06)
National Average	33.4	29.3	15.8
State Average	22.7	26.5	24.9
State Rural	20.6	29.4	30.7
State ST		44	62.5

###### 1.1.4. Under five mortality rate (U5MR):

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	109.3	94.9	66.8
State Average	121	108.7	73.6
State Rural	135.1	117.7	97.1
State ST		138.4	136

## 1.2. Child Nutritional status indicators and trends:

### 1.2.1. Percentage of Underweight children - Weight for Age - less than -2 SD:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	42.7	39.1
State Average	-	50.3	36
State Rural	-	55.5	42.3
State ST	-	59	55

### 1.2.2. Percentage of Stunting - Height for Age - less than -2SD:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	51	45.1
State Average	-	49.1	40.7
State Rural	-	44.8	46.5
State ST	-	49.4	57.2

### 1.2.3. Percentage of Wasting in Children - Weight for Height - less than -2SD:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	19.7	18.8
State Average	-	24	16.9
State Rural	-	24.4	20.5
State ST	-	30.5	27.6

### 1.2.4. Percentage of children with anemia - Hb <11g.:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	74.3	67.2
State Average	-	72.3	60.2
State Rural	-	72.7	66.6
State ST	-	83.9	80.1

## 1.3. Basic child health service provision indicators:

### 1.3.1. Percentage of children given all the basic immunizations:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	35	42	48.1
State Average	36.1	49.3	52.1
State Rural	-	42.2	51.6
State ST	-	26.4	30.4

### 1.3.2. Percentage of children who have not received any vaccination:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	11.5	4.5
State Average	-	11	13.6
State Rural	-	9	10.7
State ST	-	18.2	22.3



### DLHS 3 data on immunization:

No	Indicators	State urban	State rural	Koraput (49.6% ST)	Mayurbhanj (56.6% ST)
1.	% children receiving full immunization	74.4	61	57.4	55.3
2.	% children with no vaccination	1	4.2	NA	NA

### 1.3.3. Vitamin A administration:

#### NFHS figures for Vitamin A administration:

	Vit. A given in the last 6 months to Children aged 12 - 35 months		Vit. A given in the last 6 months to Children aged 6 - 59 months	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3
National Ave	29.7	25.1	NA	18.2
National Rural	27	24.5	NA	17.7
National ST	26	21.3	NA	14.8
Orissa Ave	26.4	29.5	NA	21.3
Orissa Rural	25.7	29.7	NA	21.6
Orissa ST	17.1	16.8	NA	14.5

#### DLHS 3 figures for vitamin A administration:

	Orissa	Koraput(49.6 % ST)	Mayurbanj (56.6% ST)
Children (9 to 35 months) who have received at least one dose of Vitamin A:	71.6	66.3	73.2
Children >21 months who have received 3 doses of Vitamin A	NA	18.4	30.4

### 1.3.4. Indicators of appropriateness of treatment and awareness about for some important child hood illness:

#### NFHS:

Indicators	National			Orissa		
	Urban	Rural	ST	Urban	Rural	ST
% children under 5 given right treatment for ARI	15.5	11.7	13	NA	11.8	NA
% children with fever receiving Treatment for Malaria	10.3	7.6	12	3.1	9.1	7.4
% of children with Diarrhoea given ORS at the health facility	32.6	23.8	29	60.5	36.9	31.2
% women with Knowledge about ORS	83.7	67.7	61	91.6	81.4	67.2

**DLHS 3:**

No	Indicators %	State urban	State rural	Koraput(49.6 % ST)	Mayurbhanj (56.6% ST)
1.	% women aware of the danger sign of ARI	33.5	20.5	NA	NA
2.	% children receiving ORS for diarrhoea	57.2	48	37.6	31.8
3.	% children receiving treatment for ARI	67	62.9	46.8	73.9

**2. Maternal Health service Indicators:****2.1. Antenatal Care:**

Indicators	National Ave.			State Ave.			State Rural			State ST		
	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3
% ANC in I Trimester		33	43.9	21.6	33.7	57.8	19.1	32	45.1	NA	NA	39.9
% 3 or more ANC		43.8	59.5	34.9	47.2	68.2	31.5	46	59.1	NA	NA	46
% with No ANC		21.7	18.5		16.9	10.1		21.1	13.9		37	22.1
% with 2 or more TT		72.2	79.5		75.5	85.7		74	82.3		55.8	73.3
% who received IFA		84	64.9		92.9	83.7		91.8	82.8		86.3	76.6
% who consumed 3 months IFA		81.3	26.8		80.5	36.9		76.7	32.5		77.8	31.6

**DLHS 3 (2007 - 2008) ANC indicators:**

No	Indicators %	State urban	State rural	Koraput(49.6% ST)	Mayurbhanj (56.6% ST)
1.	ANC in I trimester	66.1	45.2	44.6	56.2
2.	Mothers with 3 or more ANC	74.7	52	48	64.9
3.	Mothers who received at least 1 TT	89.6	81.5	97	98.9
4.	Mothers who consumed at least 100 days of IFA	46.4	36.5	NA	NA
5.	Mothers with Full ANC	36.9	20.9	NA	NA

## 2.2. Delivery care:

Indicators	National Ave.			State Ave.			State Rural			State ST		
	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3
% Institutional delivery		44.8	48.2	14	36.8	47.2	9.5	19	31.3	NA	7.7	11.7
% births assisted by health personnel		53.4	55.5	20.6	47.5	53.8	15.9	30.3	40.3	NA	14.8	17.3

### DLHS 3:

No	Indicators %	State urban	State rural	Koraput(49.6 % ST)	Mayurbhanj (56.6% ST)
1.	% of Institutional delivery	74.4	40.4	11.6	40.3
2.	% home delivery by skilled personnel	15.7	12	2.2	4.7

## 2.3. Postnatal care:

Indicators	National Ave.			State Ave.			State Rural			State ST		
	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3
% PNC within 48 hours of delivery	NA	14.2	44.5	NA	NA	41.2	NA	12	29.9	NA	3.8	18.8

### DLHS 3:

No	Indicators %	State urban	State rural	Koraput(49.6 % ST)	Mayurbhanj (56.6% ST)
1.	% PNC for mother within 2 weeks of delivery	46.4	28.5	NA	NA
2.	% PNC for mother within 48 hours of delivery	NA	NA	100	95.7
3.	% children seen within 24 hours of delivery	NA	NA	7.1	29.7
4.	% children seen within 10 days of delivery	NA	NA	10.4	32.4

## 2.4. Breast feeding practices as per DLHS 3 survey:

No	Indicators %	State urban	State rural	Koraput(49.6 % ST)	Mayurbhanj (56.6% ST)
1.	% children breast fed	63.4	63.7	66.5	78.1

	within 1 hour of birth				
2.	% children exclusively breastfed up to 6 months	45.7	42.3	48.4	42.9
3	% children above 6 months receiving weaning food	59.8	59.9		

### 2.5. Fertility Indicators:

Indicators	National Ave.			State Ave.			State Rural			State ST		
	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3
Crude birth rate	NA	NA	21.9	26.5	22.1	20.3	NA	22.4	23	NA	NA	NA
Total Fertility Rate	3.39	2.85	2.5	2.92	2.46	2.18	3	2.50	2.48	NA	2.66	3.14
Teenage pregnancy	NA	NA	19.9	NA	NA	12.7	NA	NA	15.3	NA	NA	25.6
% of birth order of >4	30.9	27.5	22.2	47.6	24.5	17.8	NA	24.5	20.9	NA	30.1	36.7

### Fertility issues - DLHS 3:

No	Indicators %	State urban	State rural	Koraput(49.6 % ST)	Mayurbhanj (56.6% ST)
1.	Teenage marriage(girls)	8.8	20.8	58	38.4
2.	Teenage births out of total births	3.2	4.8	17.6	10.6
3.	Birth order of 2 and more in women 20 - 24 years of age	38	40	57.9	50.3

## 2.6 Family planning indicators:

No	Indicators	National					Orissa				
		NFHS 3			NFHS 2	NFHS 1	NFHS 3			NFHS 2	NFHS 1
		Urban	Rural	ST			Urban	Rural	ST		
1.	Knowledge of condom/Nirodh use-Men	97.6	90.3				98.4	83.2			
2.	Knowledge of condom/Nirodh use-Women	84.9	68.4		76.1	71	86.5	56.7			
3.	Current contraceptive(modern) use women	55.8	45.3	43			50.1	43.6	30	40.3	34.1
4.	Current use of condom/Nirodh	9.8	3.2	1.7	3.1	2.4	6.7	2.2	1.7	0.9	0.6
5.	Source of female sterilization-Govt	74.2	87.7				90.8	97.6			
6.	Source of female sterilization-Private	24.3	11.4				8.5	2			
7.	Source for condoms - Govt	8.4	20				3.2	28.8			
8.	Source for condoms - Private+Shops	52.1	37.5				95.3	69.2			
9.	Source for pills-Govt	10.4	18.2				6.2	17			
10.	Source for pills-Private+Shops	72.9	58				95.7	80.2			
11.	Unmet need for FP	9.7	14.1	14			12.5	15.4	17.8		

### 3. Adult health indicators:

Indicators	National			Orissa		
	Urban	Rural	ST	Urban	Rural	ST
% women with BMI <18.5	25	40.6	47	28.6	44.1	51.3
% Men with BMI <18.5	26.5	38.8	41	27.2	37.8	38.9
% Women with Anemia	50.9	57.4	69	55.9	62.3	73.8
% Men with Anemia	17.7	27.7	40	25.7	35.9	53.6

#### 4. Indicators of HIV knowledge (NFHS 3):

Indicators	National			Orissa		
	Urban	Rural	ST	Urban	Rural	ST
% Women with comprehensive knowledge about HIV	30.3	11	8.1	24.8	8.4	3.3
% Men with comprehensive knowledge about HIV	46.6	25.1	20	42.4	19.9	11.5

#### DLHS 3:

No	Indicators %	State urban	State rural	Koraput(49.6 % ST)	Mayurbhanj (56.6% ST)
1.	% unmarried women 15 to 24 years who have heard of HIV/AIDS	78.4	67	25.1	63.6
2.	% ever married women 15 to 49 years who have heard of HIV/AIDS	69.8	44.2	13.1	39.5

#### 5.1. Performance indicators for RNTCP:

Districts	Annual NSP cases %		Cure Rate%		Treatment Success Rate%		Default Rate%		Retreatment cases %	
Koraput	83	86	78	83	84	87	10	7	15	16
Mayurbhanj	126	146	87	88	90	90	9	8	11	11
ST Districts	81	84	85	84	88	88	7	7	22	21
India		72		84						
Target		70		85						

#### 5.2. Knowledge about TB in ST:

% of people who	India	Orissa		ST	
		Women	Men	Women	Men
Have heard of TB	85.3	80.1	89.1	68.7	83
Have misconceptions about spread of TB	51.3	32.1	24.8	45.1	50.5
Know that it spreads through cough/Sneeze	50.1	40.4	53.6	28	37.6
Believe that TB can be cured	78.6	77.5	88.5	71.4	76.9
Want to keep it a secret	16.7	1.8	4.8	13.7	17

## 6. Performance indicators for Leprosy, Malaria and HIV:

State	Leprosy as on March 2008		Malaria						HIV Prevalen	
	<1/10,000 cases in	>1/10,000 cases in	Total cases		PF cases		Deaths		Wom en	Men
			2007	2008	2007	2008	2007	2008		
Orissa			3,71,879	2,60,841	3,23,150	2,28,040	221	137	0.09	0.18
Total no of districts 30	22 districts	8 districts								

## 7. Indicators for Non communicable illnesses:

	Diabetes		Asthma		Thyroid disorder	
	Women	Men	Women	Men	Women	Men
Urban India	1374	1383	1648	1329	1339	369
Rural India	641	860	1719	1797	758	392
ST	349	477	1749	1973	753	567
Lowest WI	371	705	1723	2416	529	384
Highest WI	1503	1957	1639	1248	1739	454
Orissa	556		2533		362	

## 8. Other indicators that contribute to the Health status:

### 8.1 Source of Health care:

	India		Orissa	
	Government	Private	Government	Private
Urban	29.6	69.5	62.2	37.3
Rural	36.8	62.5	78.8	19.9
Lowest WI (WI - 1)	39.4	59.9	80	18
WI - 2	37.1	62.2	76.6	22.1
ST	NA	NA	NA	NA

## 8.2. Contact with health worker:

### Percentage with any contact with health worker in the past 3 months:

	ANM/LV H	AWW	ASHA	MPW	Any HW
Urban India	6.8	4.1	0	0.7	10
Rural India	14.2	12.3	0.1	0.7	20.8
ST	12.5	13.5	0.1	1.2	19.8

## 8.3. Place of Meeting the health worker:

	Home	AWC
Urban India	62.7	20.1
Rural India	66	30.8
ST	56.3	44.5

## 8.4. Topics discussed during the meeting with the HW:

	Topics discussed	Never married	Pregnant	Non pregnant women	
				Current Contraceptive users	Current Contraceptive non users
1.	Family planning	2.2	9	11.3	8.1
2.	Immunization	26.5	70.1	54.6	68.1
3.	ANC	1.1	12.5	1.4	3.7
4.	Delivery care	0.5	4.4	1.1	3.5
5.	Delivery preparedness	0.3	1.0	0.4	0.9
6.	PNC	0.2	2.3	1.4	2.3
7.	Disease prevention	24.1	3.9	11.6	5.6
8.	Medical treatment of self	20.1	6.4	13.6	9.3
9.	Treatment of sick child	2.2	5.9	6.4	5.5
10.	Treatment of other person	4.4	0.6	2.3	1.4
11.	Malaria control	7.4	1.3	5.2	1.8
12.	Supplementary food	5.1	10.7	7.6	9.9
13.	Growth monitoring of children	2.4	7.5	7.2	7.2
14.	Early childhood care	1.1	2.4	3.0	2.0
15.	Preschool education	5.3	3.8	6.8	3.9
16.	Nutrition on health education	7.6	4.1	6.2	4.1

17.	Family life education	7.4	1.4	3.9	1.9
18.	Menstrual hygiene	6.3	0.2	1.3	0.8
19.	Others	6.8	0.9	2.7	1.6

#### 8.5. Percentage of Tobacco and Alcohol use:

	Any kind of Tobacco Use		Alcohol use	
	Women	Men	Women	Men
Urban India	6.7	49.9	0.6	30.9
Rural India	12.9	61	3.0	32.5
ST	26.3	71.2	14.1	49.9
Orissa	31.4	68.8	7.3	39.9

#### 8.6. Percentage of households covered by any type of health insurance:

	Percentage covered
Urban India	10.4
Rural India	2.2
ST	2.6

## 9. Health Facility Indicators: (based on DLHS 3 fact sheets)

### 9.1 Primary Health Center:

Number of PHCs covered by the survey:

	Number of PHCs surveyed
State	470
Koraput district	17
Mayurbanj	25

No.	Indicators	State	Koraput	Mayurbanj
1	<b>Accessibility</b>			
1.1	% of Villages with PHC within 10 KM	83.6	NA	NA
2.	<b>Availability</b>			
	% of 24/7 PHC	49.1	NA	NA
3.	<b>Staff</b>			
3.1.	% PHC with lady medical officer	53.2	17(100%)	25(100 %)
3.2.	PHC with lab technician	NA	17(100%)	25(100%)
4.	<b>Infrastructure and Facilities</b>			
4.1.	%PHC with residential facilities for MO	53.4	16(94 %)	16(64 %)
4.2.	% PHC with at least 4 beds	49.2	NA	NA
4.3.	% PHC with separate labour room		0	14( 56 %)
4.4.	PHC having normal delivery kits		17(100%)	13(52%)
4.5.	% PHC having newborn care services	17.7	17(100 %)	13(52 %)
4.6.	PHC having regular water supply		14(82 %)	21(84 %)
4.7.	PHC with deep freezer		12(70 %)	10(40 %)
5.	<b>Medical officer Training</b>			
5.1	PHC with MO who received IMNCI training in the last 5years		17(100%)	9(36 %)
6.	<b>NRHM related activities</b>			
6.1.	PHC prepared the PHC plan for current year		12(70%)	19(76%)
6.2.	PHC that received untied fund in the previous financial year		3(17%)	18(72%)

## 9.2 Subcentre:

	Number of Subcentres surveyed
State	1053
Koraput district	34
Mayurbanj	43

No.	Indicators	State	Koraput	Mayurbanj
1.	<b>Infrastructure / Facilities</b>			
1.2.	% SC located in government building	60	14(41 %)	43(100%)
1.3.	% SC having staff quarters for ANM	NA	16(47%)	30(70%)
1.4.	% ANM living in SC quarters/Village	43.2	7(20%)	6(14 %)
1.5.	% with regular water supply		24(70%)	27(63%)
1.6.	% with separate labour room		1(3%)	14(32%)
2.	<b>Staff</b>			
2.1.	% SC with ANM	78.1	34(100%)	NA
2.2.	% SC with Male Health Worker	59.9	34(100%)	39(91%)
2.3.	% SC with additional ANM	51.5	NA	NA
3.	<b>Supplies</b>			
3.1.	Sub-Centre having auto-disposable syringes	NA	5(15%)	8(19%)
3.2.	Sub-Centre reporting IFA tablets out of stock for more than 10 days during last one month	NA	3(9 %)	15(35 %)
3.3.	Sub-Centre reporting ORS packets out of stock for more than 10 days during last one month	NA	3(9 %)	17(39 %)
4.	<b>Training</b>			
4.1.	% ANM who attended Skilled Birth Attendant training	NA	33(97 %)	30(70%)
4.2.	% ANM trained in integrated management of neonatal and childhood illnesses (IMNCI) in last 5 years.	NA	34(100 %)	23(53%)
4.3.	% ANM ever been trained in integrated management of neonatal and childhood illnesses (IMNCI).	NA	0	0
5.	NRHM related activity			
5.1.	Sub-Centre that received untied fund in previous financial year.		30(88 %)	42(98 %)

### 9.3. Community Health Centre:

	Number of CHCs surveyed
State	229
Koraput district	9
Mayurbanj	14

No.	Indicators	State	Koraput	Mayurbanj
<b>1.</b>	<b>Facilities</b>			
1.1.	Having Operation Theatre %	59.4	8(89%)	13(93%)
1.2.	Having Labour Room	NA	6(67%)	13(93%)
1.3.	Having large deep freezer	NA	7(78%)	4(28%)
1.4.	Having water supply for 24 hours	NA	8(89%)	10(71%)
<b>2.</b>	<b>Services</b>			
2.1.	Having Ambulance on road	NA	6(67%)	4(28%)
2.2.	24 hours normal delivery services %	79	9(100%)	14(100%)
2.3.	24 hours New born care %	53.7	8(89%)	12(86%)
2.4.	Having Blood Storage Facility %	15.4	3(33%)	2(14%)
2.5.	Integrated Counseling and Testing Centre (ICTC)	NA	2(22%)	2(14%)
<b>3.</b>	<b>Staff</b>			
3.1.	Having General Surgeon	NA	9(100%)	11(78%)
3.2.	Having Obstetrician/ Gynecologist %	88.2	9(100%)	13(93%)
<b>4.</b>	<b>Training</b>			
4.1.	M.O. received training for Prevention, Care and Support for HIV/AIDS during last five years	NA	0	24 ( %)
4.2.	M.O. received training of basic Emergency Obstetric Care during last five years	NA	0	5(36%)
4.3.	M.O. received training of Integrated Management of Neonatal and Childhood Illness during last five years	NA	0	14(100%)

#### 9.4. Anganwadi coverage indicators: NFHS 3:

Indicators	National			Orissa		
	Urban	Rural	ST	Urban	Rural	ST
% children covered by AWC	23.4	34.8	50	20.7	90.2	83.7
% children weighed at AWC	15.6	20.8	36	37.9	56.8	61.1
% mothers counseled after weighing their children	51.8	48.5	48	18.2	29.9	27.5
% pregnant women received sup. food at AWC	15.6	21.4	37	8.7	46	61.5
% Breastfeeding women received sup. food at AWC	12.3	17.3	32	7.7	41	50.8

## Annexure 11

### Health status indicators for Karnataka:

#### 1. Child Health:

##### 1.1 Mortality Indicators:

##### 1.1.1. Neonatal Mortality Rate:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	NFHS 3 (2005-06)
National Average	48.6	43.4	39
State Average	45.3	44.4	37.9
State Urban	39.4	35.6	26.9
State Rural	47.7	48.3	44.1
State ST	NA	63.2	36

##### 1.1.2 Infant Mortality Rate:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	NFHS 3 (2005-06)
National Average	78.5	67.6	51.5
State Average	65.4	62.3	53
State Urban	60	44.1	40
State Rural	67.7	70.3	60.3
State ST	NA	85	45.8

##### 1.1.3 Child Mortality Rate:

	NFHS 1 (1991-92)	NFHS 2 (1997-98)	NFHS 3 (2005-06)
National Average	33.4	29.3	15.8
State Average	23.5	22.4	13.9
State Urban	11.3	12.1	6.2
State Rural	28.6	27.1	18.2
State ST	NA	38.9	33.6

##### 1.1.4 Under Five Mortality Rate (U5MR):

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	109.3	94.9	66.8
State Average	87.3	83.3	66.2
State Urban	70.6	55.7	45.9

State Rural	94.4	95.5	77.4
State ST	NA	120.6	77.9

## 1.2 Nutritional status Indicators and trends:

### 1.2.1. Under weight: Weight for Age - less than -2 SD:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	42.7	39.1
State Average	-	43.9	37.6
State Urban	-	38.7	30.7
State Rural	-	46.4	41.1
State ST	-	55.7	41.9

### 1.2.2. Percentage of Stunting - Height for Age - less than -2SD:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	51	45.1
State Average	-	36.6	43.7
State Urban	-	30.9	36
State Rural	-	39.3	47.7
State ST	-	41.2	51

### 1.2.3. Percentage of Wasting in Children - Weight for Height - less than -2SD:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	19.7	18.8
State Average	-	20	17.6
State Urban	-	16.2	16.5
State Rural	-	21.8	18.2
State ST	-	21	18.8

### 1.2.4. Percentage of children with anemia - Hb <11g.:

	NFHS 1(1991-92)	NFHS 2(1997-98)	NFHS 3(2005-06)
National Average	-	74.3	67.2
State Average	-	70.6	70.4
State Urban	-	66.3	67.1
State Rural	-	72.7	72
State ST	-	71.9	80.6

### 1.3. Basic child health service provision indicators:

#### 1.3.1. Percentage of children given all the basic immunizations: (BCG, measles, and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth))

	NFHS 1(1991-92)	NFHS 2 (1997-98)	DLHS 2 (2002-2004)	NFHS 3 (2005-06)	DLHS 3 (2007-2008)
National Average	35	42	46	48.1	NA
State Average	52.2	60	71.3	55	76.7
State Urban	NA	59	78.9	59.6	77.5
State Rural	NA	60.4	67.8	52.2	76.4
State ST	NA	31.5	59.5	39.7	NA
Mysore district	NA	NA	89.9	NA	91.1
Dakshin kannada	NA	NA	90	NA	91.2

#### 1.3.2. Percentage of children who have not received any vaccination:

	NFHS 1(1991-92)	NFHS 2 (1997-98)	DLHS 2 (2002-2004)	NFHS 3 (2005-06)	DLHS 3 (2007-2008)
National Average	30	14.4	19.8	5.1	NA
State Average	15.2	7.7	4.7	6.9	1.6
State Urban	NA	5.5	3.8	4.8	2
State Rural	NA	8.6	5.1	8.2	1.5
State ST	NA	13.7	6.2	10.1	NA
Mysore district	NA	NA	0	NA	NA
Dakshin kannada	NA	NA	0	NA	NA

#### 1.3.3. Vitamin A administration:

NFHS Figures:

	Vit. A given in the last 6 months to Children aged 12 - 35 months		Vit. A given in the last 6 months to Children aged 6 - 59 months	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3
National Ave	29.7	25.1	NA	18.2
National Urban	21.2	26.9	NA	19.7
National Rural	27	24.5	NA	17.7
<b>National ST</b>	26	21.3	NA	14.8
Karnataka Ave	22.8	22.8	NA	16.1
Karnataka Urban	23.3	24.7	NA	18.1
Karnataka Rural	22.5	21.7	NA	15
<b>Karnataka ST</b>	26.8	14.7	NA	13.2

**DLHS 3:**

	Karnataka			Mysore district	Dakshin kannada
	Ave.	Urban	Rural	Rural	Rural
Children (9 to 35 months) who have received at least one dose of Vitamin A:	69.4	70.3	69	85.5	92.2
Children >21 months who have received 3 doses of Vitamin A	NA	NA	NA	13.2	10.2

**1.3.4. Indicators of appropriateness of treatment and awareness about for some important child hood illness NFHS 3:**

Indicators	National			Karnataka		
	Urban	Rural	ST	Urban	Rural	ST
1. % children under 5 given right treatment for ARI	15.5	11.7	13	NA	NA	NA
2. % children with fever receiving Treatment for Malaria	10.3	7.6	12	11.4	8	NA
3. % of children with Diarrhoea given ORS at the health facility	32.6	23.8	29	36.9	28.7	NA
4. % women with Knowledge about ORS	83.7	67.7	61	80.8	65.7	59.9

**2 Maternal Health Service and Awareness indicators:****2.1. Antenatal Care:****2.1.1. NFHS 2 and 3 figures:**

Indicators	National Ave.		State Ave.		State Rural		State ST	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3
%ANC in I Trimester	33	43.9	52.7	70.9	46.1	64.1	NA	52.9
% 3 or more ANC	43.8	59.5	71.4	79.5	64.9	73.2	NA	62.4
% with No ANC by health professional	21.7	18.5	13.7	9.4	17.3	12.5	28.2	17.9
% with 2 or more TT	72.2	79.5	74.9	78.6	70.3	74.4	55.7	60.1
% who received IFA	84	64.9	95.2	74.3	94.5	70.8	96.3	56.8
% who consumed 3 months IFA	81.3	26.8	86.2	39.3	94.5	35	94.2	26.1

### 2.1.2. The DLHS 2 and 3 figures:

No	Indicators %	State urban		State rural		Mysore district		Dakshin kannada	
		DLH S 2	DLH S 3	DLH S 2	DLH S 3	DLH S 2	DLHS 3	DLHS 2	DLHS 3
1.	ANC in I trimester	78.9	81.7	62.5	68.2	77.1	84.6	84.5	88.8
2.	Mothers with 3 or more ANC	81.4	89	75.9	78.9	85	91.7	94.7	97
3.	Mothers who received at least 1 TT	91.4	91.8	83	85.1	95.4	96.6	97	97.9
4.	Mothers who consumed at least 100 days of IFA	52.2	48.1	46.8	37.9	16.4	NA	26.9	NA
5.	Mothers with Full ANC	37.1	45.7	26.5	34.7	15.1	NA	24.5	NA

(Full ANC as per DLHS: At least three visits for antenatal check-up, one TT injection received and 100 IFA tablets or adequate amount of syrup consumed.)

### 2.1.3. Components of ANC in Karnataka - NFHS 3:

Components	Urban	Rural
Weighed	92.5	73.6
Blood pressure measured	96	85.3
Urine sample taken	94.7	78.9
Blood sample taken	96	81.3
Abdomen examined	95.4	85.2

### 2.1.4. Percentage receiving information on specific pregnancy complications in Karnataka- NFHS 3:

Information given	Urban	Rural
Vaginal bleeding	33.4	18
Convulsions	33.8	19.4
Prolonged labour	35	19.3
Where to go if experienced pregnancy complications	55	39

## 2.2. Delivery care:

### 2.2.1. NFHS data:

Indicators	National Ave.		State Ave.		State Rural		State ST	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3
% of institutional delivery	44.8	48.2	51.1	64.7	38.5	54.8	31	41.5
%births assisted by health personnel	53.4	55.5	59.1	69.7	46.9	61	38.7	47.1

(Health personnel as per NFHS 3: Doctor, auxiliary nurse midwife, nurse, midwife, lady health visitor or other health personnel.)

### 2.2.2. DLHS 3:

No	Indicators	State urban(DLHS 3)	State rural(DLHS 3)	Mysore(DLHS 3)	Dakshin kannada (DLHS 3)
1.	% of Institutional delivery	79.8	59.7	79.6	96
2.	% home delivery by skilled personnel	25.3	18	10.6	11.5

## 2.3. Postnatal care:

### 2.3.1. NFHS 2 and 3 data:

Indicators	National Ave.		State Ave.		State Rural		State ST	
	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3	NFHS 2	NFHS 3
% PNC within 48 hours of delivery	14.2	44.5	10.2	58.5	9	51	NA	47.4

### 2.3.2. DLHS 3 data:

No	Indicators %	State urban	State rural	Myso re	Dakshin kannadal
1.	PNC for mother within 2 weeks of delivery	81.5	64.7	NA	NA
2..	PNC for mother within 48 hours of delivery	NA	NA	62.6	83.3
3.	children seen within 24 hours of delivery	NA	NA	67.9	86.4
4.	children seen within 10 days of delivery	NA	NA	73.9	88.4

## 2.4. Breast feeding practices % as per the NFHS 3 and DLHS:

	NFHS 3	DLHS 3		
	Karnataka	Karnataka	Mysore	Dakshin kannada

								DLHS 3	DLHS 3
		Total	Rural	ST	Total	Rural	Urban		
1.	Breastfed within 1 hour of birth	35.7	34.4	23.4	46.9	46.4	NA	42.3	75.6
2.	Breastfed within 1 day of birth	74.6	74.4	60.9	NA	NA	NA	NA	NA
3.	Prelacteal feeds	29.2	28.9	36.2	NA	NA	NA	NA	NA
4.	Exclusive breastfeeds for 6 months	58.6	NA	NA	64.3	62.8	NA	34.5	42.8

## 2.5. Fertility Indicators:

### 2.5.1. NFHS:

Indicators	National Ave.			State Ave.			State Rural			State ST		
	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3	NFHS 1	2	3
Crude birth rate	NA	NA	21.9	25.9	20.4	19.6	27.5	21.4	20.2	NA	NA	NA
Total Fertility Rate	3.39	2.85	2.5	2.85	2.13	2.07	3.09	2.25	2.19	NA	2.38	2.53
Teenage pregnancy	NA	NA	19.9	NA	NA	17	NA	NA	20.9	NA	NA	27
% of birth order of >4	30.9	27.5	22.2	24.8	18.8	12.8	NA	20.7	15.3	NA	17.6	24

### 2.5.2. DLHS 3 (Marriage and fertility):

No	Indicators %	State urban	State rural	Mysore	Dakshin kannada
1.	Teenage marriage(girls) before 18 years	14.2	25.7	15.8	5.4
2.	Teenage births out of total births	5.5	12.6	23.8	5.8
3.	Birth order of 2 and more in women 20 - 24 years of age	54.2	61.5	51.9	31.6

### 2.6.1. NFHS: Family planning indicators:

No	Indicators	National					Karnataka				
		NFHS 3			NFHS 2	NFHS 1	NFHS 3			NFHS 2	NFHS 1
		Urban	Rural	ST			Urban	Rural	ST		
1.	Knowledge of condom/Nirodh Men use-	97.6	90.3				95.4	81.2			
2.	Knowledge of condom/Nirodh use-	84.9	68.4		76.1	71	66.7	34			

	Women										
3.	Current contraceptive(modern) use women	55.8	45.3	43			59.2	64.7	61	56.5	47.6
4.	Current use of condom/Nirodh	9.8	3.2	1.7	3.1	2.4	3.5	0.7	0.7	1	1.2
5.	Source of female sterilization-Govt.	74.2	87.7				87.4	91.5			
6.	Source of female sterilization-Private	24.3	11.4				20.1	7.2			
7.	Source for condoms - Govt	8.4	20				9.1	NA			
8.	Source for condoms - Private+Shops	52.1	37.5				87.3	NA			
9.	Source for pills-Govt	10.4	18.2				NA	NA			
10.	Source for pills- Private+Shops	72.9	58				NA	NA			
11.	Unmet need for FP	9.7	14.1	14			9.9	9.4	5.3		

### 2.6.2. DLHS (Karnataka):

	DLHS 3					DLHS 2				
	Rural	Urban	ST	Mysore	Dakshin kannada	Rural	Urban	ST	Mysore	Dakshin Kannada
Unmet need for FP %	15.2	17.5	NA	10.6	28	14	17.5	NA	8.5	17

### 3. Adult health indicators:

Indicators	National			Karnataka		
	Urban	Rural	ST	Urban	Rural	ST
% women with BMI <18.5	25	40.6	47	26.3	41.5	48.5
% Men with BMI <18.5	26.5	38.8	41	25.3	39.9	34.4
% Women with Anemia	50.9	57.4	69	48.3	53.5	56.8
% Men with Anemia	17.7	27.7	40	12.2	23.7	18.9

### 3 Indicators of HIV knowledge and Prevalence:

#### 5. NFHS 3:

Indicators	National			Karnataka		
	Urban	Rural	ST	Urban	Rural	ST
1 % Women with comprehensive knowledge about HIV	30.3	11	8.1	17.5	7.6	5.8
2 % Men with comprehensive knowledge about HIV	46.6	25.1	20	41.2	20.2	18.7

(Respondents with comprehensive knowledge say that the use of a condom for every act of sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting HIV/AIDS, say that a healthy-looking person can have HIV/AIDS, and reject the two most common misconceptions in NFHS-3, namely that HIV/AIDS can be transmitted by mosquito bites and by sharing food.)

## 5.2. DLHS 3:

No	Indicators	State urban	State rural	Mysore DLHS 3	Dakshin kannada DLHS 3
1.	% unmarried women 15 to 24 years who have heard of HIV/AIDS	94.7	90.9	81.9	97.8
2.	% ever married women 15 to 49 years who have heard of HIV/AIDS	94.1	88.1	69.6	91.9

## 5.3. Prevalence of HIV (NFHS 3):

	Men			Women			Total
	Urban	Rural	Total	Urban	Rural	Total	
National	0.41	0.32	0.36	0.29	0.18	0.23	0.28
Karnataka			0.85			0.54	0.69

## 6. Performance indicators for RNTCP:

### 6.1 Annual report of RNTCP - 2008-2009:

Place	Annual NSP case detection rate %	Cure rate of NSP cases %	Default of NSP cases %	Default of Retreatment cases %
Karnataka	59	77	8.9	22
Mysore	66	77		
Dakshin kannada	51	79		
ST Districts	82	85		
India Total	72	84	6	14.9
Target	70	85		

### 6.2. Knowledge about TB in ST - NFHS 3:

% of people who	India	Karnataka		ST	
		Women	Men	Women	Men
Have heard of TB	85.3	64.7	76.9	48	70.8
Have misconceptions about spread of TB	51.3	50.3	52.8	50	48.8
Know that it spreads through	50.1	50.4	57.2	45.9	53.3

cough/Sneeze					
Believe that TB can be cured	78.6	72.7	79.3	71.3	79.8
Want to keep it a secret	16.7	19.9	19.6	16.5	21.6

## 7. Performance indicators for Leprosy, Malaria:

### 7.1. Leprosy:

Karnataka State	Leprosy as on March 2008			
	<1/10,000 cases in		>1/10,000 cases in	
Total no of districts 27	26		1	

### 7.2. Malaria:

Malaria					
Total cases		PF cases		Deaths	
2007	2008	2007	2008	2007	2008
49,355	44,370	11,295	9,245	18	7

## 8. Indicators for Non communicable illnesses:

	Diabetes		Asthma		Thyroid disorder	
	Women	Men	Women	Men	Women	Men
Urban India	1374	1383	1648	1329	1339	369
Rural India	641	860	1719	1797	758	392
ST	349	477	1749	1973	753	567
Lowest WI	371	705	1723	2416	529	384
Highest WI	1503	1957	1639	1248	1739	454
Karnataka Urban	1,047	1,353	1,527	601	785	200
Karnataka Rural	431	693	1,076	756	807	347

## 9. Other indicators that contribute to the Health status:

### 9.1 Source of Health care:

	India		Karnataka	
	Government	Private	Government	Private
Urban	29.6	69.5	23.3	75.6
Rural	36.8	62.5	44.6	54.5
Lowest WI (WI)	39.4	59.9	55.5	44.2

- 1)				
WI - 2	37.1	62.2	49.2	49.7
ST	NA	NA	NA	NA

### 9.2 Contact with health worker:

Percentage with any contact with HW in the past 3 months:

	ANM/LV H	AWW	ASHA	MPW	Any HW
Urban India	6.8	4.1	0	0.7	10
Rural India	14.2	12.3	0.1	0.7	20.8
ST	12.5	13.5	0.1	1.2	19.8

### 9.3. Place of Meeting the HW:

	Home	AWC
Urban India	62.7	20.1
Rural India	66	30.8
ST	56.3	44.5

### 9.4. Topics discussed during the meeting with the HW:

	Topics discussed	Never married	Pregnant	Non pregnant women	
				Current Contraceptive users	Current Contraceptive non users
1.	Family planning	2.2	9	11.3	8.1
2.	Immunization	26.5	70.1	54.6	68.1
3.	ANC	1.1	12.5	1.4	3.7
4.	Delivery care	0.5	4.4	1.1	3.5
5.	Delivery preparedness	0.3	1.0	0.4	0.9
6.	PNC	0.2	2.3	1.4	2.3
7.	Disease prevention	24.1	3.9	11.6	5.6
8.	Medical treatment of self	20.1	6.4	13.6	9.3
9	Treatment of sick child	2.2	5.9	6.4	5.5
10.	Treatment of other person	4.4	0.6	2.3	1.4
11.	Malaria control	7.4	1.3	5.2	1.8
12.	Supplementary food	5.1	10.7	7.6	9.9
13.	Growth monitoring of	2.4	7.5	7.2	7.2

	children				
14.	Early childhood care	1.1	2.4	3.0	2.0
15.	Preschool education	5.3	3.8	6.8	3.9
16.	Nutrition on health education	7.6	4.1	6.2	4.1
17.	Family life education	7.4	1.4	3.9	1.9
18.	Menstrual hygiene	6.3	0.2	1.3	0.8
19.	Others	6.8	0.9	2.7	1.6

### 9.5. Percentage of Tobacco and Alcohol use:

	Any kind of Tobacco Use		Alcohol use	
	Women	Men	Women	Men
Urban India	6.7	49.9	0.6	30.9
Rural India	12.9	61	3.0	32.5
ST	26.3	71.2	14.1	49.9
Karnataka	4.9	44.8	1.2	28.3

### 9.6 Percentage of households covered by any type of health insurance:

	Percentage covered
Urban India	10.4
Rural India	2.2
ST	2.6

## 10. Health Facility Indicators: (based on DLHS 3 fact sheets)

### 3.6 Primary Health Center:

Number of PHCs covered by the survey:

	Number of PHCs surveyed
State	673
Mysore	25

No.	Indicators	State	Mysore	Dakshin Kannada
1	<b>Accessibility</b>			
1.1	% of Villages with PHC within 10 KM	77.9		
	<b>Availability</b>			
2.	% of 24/7 PHC	47		
3.	<b>Staff</b>			
3.1.	% PHC with lady medical officer	23.2	5/25	5/24
3.2.	PHC with lab technician		10/25	20/24
4.	<b>Infrastructure and Facilities</b>			
4.1.	% PHC with residential facilities for MO	58.7	10/25	20/24
4.2.	% PHC with at least 4 beds	85.7		
4.3.	% PHC with separate labour room		18/25	18/24
4.4.	% PHC having normal delivery kits		23/25	22/24
4.5.	% PHC having newborn care services	45.9	1/25(Warmer)	1/24(Warmer)
4.6.	PHC having regular water supply		24/25	24/24
4.7.	PHC with deep freezer		10/25	5/24
5.	<b>Medical officer Training</b>			
5.1	PHC with MO who received IMNCI training in the last 5years		3/25	4/24
6.	<b>NRHM related activities</b>			
6.1.	PHC prepared the PHC plan for current year		25/25	20/24
6.2.	PHC that received untied fund in the previous financial year		25/25	24/24

### 10.2. Sub centre:

	Number of Sub centers surveyed
State	880
Mysore	29
Dakshin Kannada	31

No.	Indicators	State	Mysore	Dakshin Kannada
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1.	<b>Infrastructure / Facilities</b>			
1.2.	% SC located in government building	57.6	16/29	18/31
1.3.	% SC having staff quarters for ANM		7/29	13/31
1.4.	% ANM living in SC quarters/Village	46.5	6/29	3/31
1.5.	% with regular water supply		25/29	25/31
1.6.	% with separate labour room		18/29	13/31
2.	<b>Staff</b>			
2.1.	% SC with ANM	92.7		
2.2.	% SC with Male Health Worker	40.5	12/29	4/31
2.3.	% SC with additional ANM	1.8		
3.	<b>Supplies</b>			
3.1.	Sub-Centre having auto-disposable syringes		27/29	31/31
3.2.	Sub-Centre reporting IFA tablets out of stock for more than 10 days during last one month		4/29	7/31
3.3.	Sub-Centre reporting ORS packets out of stock for more than 10 days during last one month		2/29	5/31
4.	<b>Training</b>			
4.1.	% ANM who attended Skilled Birth Attendant training		28/29	29/31
4.2.	% ANM trained in integrated management of neonatal and childhood illnesses (IMNCI) in last 5 years.		7/29	10/31
4.3.	% ANM ever been trained in integrated management of neonatal and childhood illnesses (IMNCI).		9/29	10/31
5.	<b>NRHM related activity</b>			
5.1.	Sub-Centre that received untied fund in previous financial year.		25/29	30/31

### 10.3. Community Health Centre:

	Number of CHCs surveyed
State	118
Mysore	2
Dakshin Kannada	6

No.	Indicators	State	Mysore	Dakshin
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				Kannada
1.	<b>Facilities</b>			
1.1.	Having Operation Theatre %	72	2/2	6/6
1.2.	Having Labour Room		2/2	6/6
1.3.	Having large deep freezer		2/2	4/6
1.4.	Having water supply for 24 hours		2/2	5/6
2.	<b>Services</b>			
2.1.	Having Ambulance on road		2/2	5/6
2.2.	24 hours normal delivery services %	94.1	2/2	6/6
2.3.	24 hours New born care %	60.7	1/2	2/6
2.4.	Having Blood Storage Facility %	5.6	0/2	0/6
2.5.	Integrated Counseling and Testing Centre (ICTC)		2/2	6/6
3.	<b>Staff</b>			
3.1.	Having General Surgeon		0/2	0/6
3.2.	Having Obstetrician/ Gynecologist %	33.9	1/2	5/6
4.	<b>Training</b>			
4.1.	M.O. received training for Prevention, Care and Support for HIV/AIDS during last five years		4/2	14/6
4.2.	M.O. received training of basic Emergency Obstetric Care during last five years		3/2	1/6
4.3.	M.O. received training of Integrated Management of Neonatal and Childhood Illness during last five years		2/2	2/6

#### 10.4. Anganwadi coverage indicators: NFHS 3:

Indicators	National			Karnataka		
	Urban	Rural	ST	Urban	Rural	ST
% children covered by AWC	23.4	34.8	50	85	9.6	95.9
% children weighed at AWC	15.6	20.8	36	5.2	24.3	19.1
% mothers counseled after weighing their children	51.8	48.5	48	54.4	51.7	56.3
% pregnant women received sup. food	15.6	21.4	37	12.5	39.5	31.9
% Breastfeeding women received sup. food	12.3	17.3	32	6.1	24.8	24.4

#### Annexure 12

#### FIELD VISIT PHOTOGRAPHS - JHARKHAND



The Team in front of PHC Bishunpur in Gumla District Group discussion in a tribal hamlet



Dilapidated labour cot and inpatient bed in a PHC in Dumka District



Unused ice packs stacked up in a PHC Another group discussion in a tribal hamlet

## FIELD VISIT - MAHARASHTRA

PNC ward in a PHC



PHC in Yawatmal



PHC in Raighad



FGD in Yawatmal



## FIELD VISIT - MADHYA PRADESH



An anganwadi visited in Mandla district



Group discussion in a SC



Syringes and cartons discarded in PHC



CHC corridor with inpatients



Group discussion in Jhabua



Inpatient facility, CHC Jhabua

