# Annual Report - 2003-04

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## SCIENTIFIC PROGRAMMES

**Scientific Advisory Committee Meeting – 7th Nov. 2003**

### Foreign Visits

**Dr. D. Sahu attended the 2003 Annual Meeting of the Population Association of America at Holton Minneapolis and Towers. Minneapolis, Minnesota, 1-3 May, 2003.**

**Dr. Atul Juneja attended the Second Annual Conference of Frontiers in Cancer Prevention Research of American Association for Cancer Research held at Phoenix, Arizona USA , 26-30 October, 2003.**

### Awards & Honors

**Dr. Abha Rani Aggarwal was awarded with the Prof. P.V. Sukhatme in the XXIth Annual Conference of ISMS at Jodhpur, 28-30 Nov. 2003, for her paper enitled "Nutritional Status and Diet Intake of Pre-School Children in Delhi".**

**Dr. Tulsi Adhikari was awarded with the Prof. R.N. Shrivastava Award in the XXIth Annual Conference of ISMS at Jodhpur, 28-30 Nov. 2003, for best presentation of her paper entitled "Identification of Poor : Quality of Life Approach".**

# Training Programmes

- Hands on computer training in statistical packages during 21 – 25 July 2003. Sixteen researchers from Delhi based ICMR and other Institutes participated in the training programme.
- One week training course in 'Research Methodology and Data Management' for the benefit of Scientists in ICMR Institutes/Centers and Medical Colleges/Hospitals/ health research organizations. The course commenced on 1st Sep.2003. A four member team headed by Dr. Anil K. Mishra from Nepal Health Council also attended the training programme.
- WHO fellow U Tun Aung Hla from Mayanmar attended training in Health Statistics at this Institute for one month in Sept., 2003. As part of this training he was given exposure to all fields of Health Research in the country. In this regard he was given the opportunity to visit different research Institute in Delhi as well.
- Training to the students of Centre for Bioinformatics from Ranchi from 16th Sept to 10th Oct 2003.
- A ten days training to M.Sc. (Final) Statistics students of Kurukshetra University was carried out during Dec 22, 2003 - Jan 2, 2004. Fourteen students attended the training programme.

Training to Students of M.Sc. Statistics, Kurukshetra University

## COMPLETED STUDIES

### 1. Base Line Survey on Impact Assessment of ICDS Food Fortification In Uttar-Pradesh

#### Introduction

Micronutrients are life-sustaining nutrients that are needed only in small quantities for effective functioning of brain, the immune system and energy metabolism. To call them micronutrients may be in conformity with the minute quantities needed by the human body but it is certainly not consistent with the nature and extent of damage being brought about by their deficiencies. Micronutrient malnutrition makes a considerable negative impact on the health, learning abilities, and cognitive development and work capacity. Among women, it affects the pregnancy outcome. Deficiencies of micronutrients are closely linked with childhood illness and mortality, yet these deficiencies are largely preventable. Diet diversification, food fortification, supplementation

and public health measures are the ways to control and prevent micronutrient malnutrition. The result is a devastating public health problem, affecting people throughout the socio-economic spectrum. For the nation, communities and individuals, micronutrient malnutrition takes a heavy toll in terms of lost productivity, vitality and initiative on all age groups but it is most devastating for pre chool children and pregnant women.

### Why Undertake the Present Research?

There is sufficient scientific evidence available from the western researches, which reassures that the consumption of most foods is self-limiting and no incidence of nutritional imbalance / adverse effects on consumption of micronutrient-fortified foods in any supplementary nutrition programme has ever been reported worldwide. However, the concept of food fortification is relatively uncommon in India. Hence, sometimes due to ignorance or due to paucity of research to assess the impact of fortifying supplementary food in large feeding programmes, there is an apprehension that fortification may either lead to imbalance of nutrients in the body or may not really improve the nutritional status of people consuming marginal diets. This has lead to a prudent approach in taking bold decisions to fortify the ICDS supplementary food to reduce micronutrient malnutrition in different states. The current research has planned to test and provide empirical evidence on the impact of fortifying ICDS supplementary food through a well-conducted research landmark decision of WFP and IRMS – ICMR. (IRMS is a premier research organization of the Indian Council of Medical Research, Government of India and is partnering with WFP in conducting baseline and end line evaluations to assess the impact of ICDS food in the two most nutritionally vulnerable states – UP and MP).

### Objectives

- To Determine the baseline prevalence of iron and Vitamin-A deficiencies among children 6-59 months in the Kanpur Dehat district of UP.
- To Monitor the supplementation of fortified food and
- To Undertake end line evaluation for evaluating the impact of supplementation.

### Methodology

The district selected for the study is Kanpur Dehat where in two blocks were selected namely Maitha (where fortified food will be supplied) and Rajpur (where non fortified food will continue to be used). Thirty villages from each of the two blocks were selected by Probability Proportion to Size (PPS). From the each selected village, 25 children were selected for the anthropometrics measurement, Dietary intake of 10 children for clinical examinations and 5 for the Bio-chemical examinations. A survey was conducted to assess the impact of fortified supplementary food under ICDS on the prevalence of micronutrient Deficiencies/malnutrition (Vitamin-A & Iron) among the ICDS beneficiaries in Kanpur Dehat district of Uttar Pradesh. The sample size covered works out as 750 children from Kanpur Dehat district. The sample was selected in the form of 30 clusters and 25 children per cluster. However, instead of 25 children per cluster, it was decided by TAC that about 50 children should be taken for clinical assessment for Bitots Spot and Anemia while for sub clinical manifestation of nutritional deficiencies, the blood sample could be taken for much smaller group i.e, for 10 children. Thus, Sample size would be 1500 for clinical assessment and 300 for blood/ biochemical test for both the blocks.

### Characteristics of Households

As discussed earlier, 30 clusters (villages) each from two blocks Maitha and Rajpur of Kanpur Dehat districts were considered for the study. Various characteristics of the sample households (religion, caste, type of house, land holding, use of fuel for cooking, availability of electricity, drinking water and toilet facility) in the above two blocks (intervention block and control block) are provided in table 1. In both the blocks, over ninety percent households are Hindu and rest are Muslim. While the sample of Rajpur block constitute one tenth household from Muslim against only four percent households in Maitha block. The sample was selected in such a manner that the children and mothers are likely to be beneficiary of ICDS. Accordingly, the majority of the sample households of both the blocks are either schedule castes or other backward class.

**Table 1.1: Households Characteristics (%)**

| CHARACTERISTICS | | Maitha | Rajpur |
|---|---|---|---|
| RELIGION | HINDU | 95.8 | 90.7 |
| | MUSLIM | 4.2 | 9.3 |
| CASTE | SC/ST | 46.3 | 42.5 |
| | OBC | 42.3 | 37.1 |
| | OTHER | 11.4 | 20.5 |
| LAND HOLDING | | | |
| <1 ACRE | | 44.1 | 62.2 |
| 1-2 ACRE | | 34.3 | 18.7 |
| >2 ACRES | | 21.7 | 19.1 |
| TYPE OF FAMILY | | | |
| NUCLEAR | | 64.7 | 65.3 |
| JOINT | | 35.3 | 34.7 |
| TYPE OF HOUSE | | | |
| KUTCHA/ JHUGGI | | 51.9 | 41.3 |
| SEMI PUKKA | | 40.4 | 48.1 |
| PUKKA | | 7.7 | 10.6 |
| FUEL USED FOR COOKING | | | |
| FIREWOOD/COW DUNG CAKES | | 98.3 | 98.3 |
| COAL | | 1.2 | 1.5 |
| GAS | | .5 | .2 |
| ELECTRICITY | | 8.6 | 25.9 |
| DRINKING WATER | | | |
| TAP | | 1.0 | 4.1 |
| HANDPUMP | | 75.3 | 71.2 |
| WELL | | 23.6 | 24.7 |
| DRINKING WATER | | | |
| INSIDE HOUSE | | 16.6 | 7.1 |
| TOILET FACILITY | | | |
| OPEN FIELD | | 97.2 | 94.0 |
| PITS | | 1.2 | .2 |
| FLUSH/LATRINES WITHOUT FLUSH | | 1.5 | 5.8 |

Health and Education (NHEd)

It was little more pronounced in case of Maitha block where over 46 percent households were from SC and over 42 percent households were from OBC against such percentage was 43 and 37 in case of Rajpur. Only few (below 10 percent) were having pucca houses in both the blocks. Almost all the households were using open field as a toilet facility and Firewood/cow-dung for cooking purpose in both the blocks. More than three-fourth of the households are having land up to 2 acres. Less than one tenth of the households are having the electricity in Maitha and about one forth in Rajpur block. Hand pumps were the most common facility available in the village for drinking water & food making Hand pumps are mostly outside of the house in both the blocks. It has been observed that households characteristics of these two blocks are almost similar.

**Table 2: Exposure to Nutrition , Health and Education (NHEd)**

| CHARACTERISTICS | Maitha | Rajpur |
|---|---|---|
| DAILY | 5.8 | 2.5 |
| ONCE A WEEK | 9.1 | 5.2 |
| ONCE A FORTNIGHT | 3.3 | 2.7 |
| ONCE A MONTH | 4.4 | 4.1 |
| OCCASIONALLY | 15.6 | 21.0 |
| NEVER | 61.9 | 64.5 |

As regards to exposure on health and Nutrition, About two thirds of the households had no exposure on health and Nutrition. Table 3 gives information on feeding practices and supplementation. Here again, practices are similar in the two blocks. The breast feeding practices are also in the agreement with the district level figure (68%) as revealed by the NIN/IASDS survey.

**Table 3 : Feeding practices and supplementation**

| Observations | Maitha | Rajpur |
|---|---|---|
| BREAST FEEDING < 24 HOURS | 79.0 | 77.1 |
| COMPLEMENTARY FOOD GIVEN WITHIN 3 MONTHS | 78.4 | 76.6 |
| TYPE OF COMPLEMENTARY FOOD* | | |
| MILK | 80.0 | 76.3 |
| RICE | 10.0 | 9.1 |
| OTHER | 10.0 | 15.0 |
| REASONS OF GIVING COMPLEMENTARY FOOD | | |
| MOTHER'S MILK NOT SUFFICIENT | 65.0 | 81.7 |
| MOTHER'S ILL HEALTH | 7.5 | 1.7 |
| FOR PROPER GROWTH OF CHILD/CHILD ASK FOR | 27.5 | 16.6 |

Table 4 gives analysis of personal hygiene practices of mother and child. The practices seemed to be better in Rajpur block. While 92.3% of children of Rajpur block had size of nails < 1 mm, this percentage among children of Maiths was only 72.1%. Similarly, higher percentage of children of Rajpur block had clean nails. The percentage of children (as well as mothers) washing hands was also higher in Rajpur.

**Table 4: Personal Hygiene Practices of Mother and Child**

| | Maitha | Rajpur |
|---|---|---|
| CHILD | | |
| SIZE OF NAILS <1 mm | 72.1 | 92.3 |
| CLEAN NAILS OF CHILD | 48.7 | 56.1 |
| HAND WASHED BY CHILD | 32.0 | 42.3 |
| MOTHER | | |
| HAND WASH DONE BEFORE SERVING THE MEAL | 72.2 | 84.6 |

**Table 5. Management practices during selected Illnesses**

| Illness/Practice | Maitha | Rajpur |
|---|---|---|
| FEVER | | |
| HOME REMEDIES | 72.7 | 11.2 |
| TAKE TO LOCAL VAID | 22.4 | 73.4 |
| PHC\SC | 4.9 | 15.4 |
| COUGH | | |
| HOME REMEDIES | 68.3 | 77.8 |
| TAKE TO LOCAL VAID | 26.0 | 22.2 |
| PHC\SC | 5.7 | |
| COLD | | |
| HOME REMEDIES | 76.8 | 81.1 |
| TAKE TO LOCAL VAID | 19.0 | 18.9 |
| PHC\SC | 4.2 | |

While management of cough and cold was similar in the two blocks, the management of fever differed significantly. While nearly three fourth of mothers went for home remedies for treating fever in Maiths, almost similar percentage of mothers opted for Vaid.

## Food Frequency

The Information on Food Frequency has been discussed in this Chapter. The Information on Food Frequency and average food consumption of the children are being presented in Table 6. Table 7 gives this information for whole district as obtained in NIN/IASDS survey. A comparison of average consumption values indicates that average food consumption of cereals is higher at district level. It was, however, higher in Rajpur block and the same matches with that of district level consumption. The block level average consumption of pulses is higher than the district level. While comparing the block level consumption of Pulses, Rajpur block consumption is higher. The average consumption of green leafy vegetables at the district level and block level is same. The consumption of other major food items like milk, sugar & jaggery is lower at the district level as compared to the block level consumption but among the block level average consumption of sugar and jaggery is higher in Rajpur block. It has been observed that average consumption of fat was almost of same level in both the blocks but higher at district level.

**Table 6. Food Frequency ( Percentage) & Food Consumption (average)**

| | NEVER | DAILY | WEEKLY | ONCE IN TWO WEEKS | MONTHLY | AVERAGE CONSUMPTION (gm) |
|---|---|---|---|---|---|---|
| **Maitha Block** | | | | | | |
| RICE | 78.1 | 20.1 | 1.7 | - | - | 26 |
| WHEAT | 56.8 | 41.6 | 1.0 | .5 | - | 36 |
| PULSES/LEGUMES | 5.1 | 8.2 | 55.1 | 11.0 | 20.6 | 23 |
| GREEN LEAFY VEG. | 11.5 | 3.1 | 51.0 | 15.9 | 18.4 | 4 |
| OTHER VEGITABLES | 18.2 | 23.3 | 53.3 | 1.6 | 3.7 | 23 |
| ROOTS & TUBERS | 5.6 | 81.1 | 11.5 | .7 | 1.0 | 50 |
| MILK | 15.9 | 53.0 | 10.5 | 1.9 | 18.7 | 134 (ml) |
| FRUITS | 32.9 | 2.1 | 10.1 | 8.2 | 46.7 | 2 |
| MUTTON | 73.6 | .2 | .5 | 1.6 | 24.1 | - |
| CHICKEN | 89.7 | | .2 | .7 | 9.4 | - |
| FISH | 72.9 | .7 | 1.0 | 2.1 | 23.3 | 1 |
| EGG | 79.5 | .7 | 2.3 | 1.4 | 16.1 | - |
| FATS | 21.7 | 51.2 | 18.9 | 4.9 | 3.3 | 4 (ml) |
| SUGAR | 10.7 | 55.1 | 27.1 | 4.5 | 2.6 | 11 |
| JAGGERY | 36.9 | 32.0 | 24.8 | 3.5 | 2.8 | 7 |
| **Rajpur Block** | | | | | | |
| RICE | 75.5 | 14.6 | 8.6 | 1.3 | | - 44 |
| WHEAT | 27.8 | 64.9 | 5.3 | .7 | 1.3 | 88 |
| PULSES | 1.3 | 9.3 | 66.2 | 8.6 | 14.6 | 37 |
| GREEN LEAFY VEG. | 7.9 | | 37.1 | 33.8 | 21.2 | 4 |
| OTHER VEGITABLES | 11.3 | 11.9 | 74.8 | .7 | 1.3 | |
| ROOTS & TUBERS | 4.0 | 51.0 | 43.0 | 1.3 | .7 | 49 |
| MILK | 10.6 | 40.4 | 16.6 | 13.2 | 19.2 | 129 (ml) |
| FRUITS | 13.2 | 5.3 | 26.5 | 15.2 | 39.7 | 34 |
| MUTTON | 63.6 | | | 2.0 | 34.4 | 4 |
| CHICKEN | 72.2 | | | 1.3 | 26.5 | - |
| FISH | 64.2 | | .7 | 1.3 | 33.8 | - |
| EGG | 66.9 | | .7 | 2.0 | 30.5 | - |
| OTHER | 96.7 | 1.3 | | 1.3 | .7 | 3 |
| FATS | 9.3 | 37.7 | 21.2 | 21.2 | 10.6 | 3 (ml) |
| SUGAR | 17.2 | 37.1 | 41.7 | 4.0 | | 12 |
| JAGGERY | 7.9 | 31.1 | 44.4 | 15.9 | .7 | 12 |

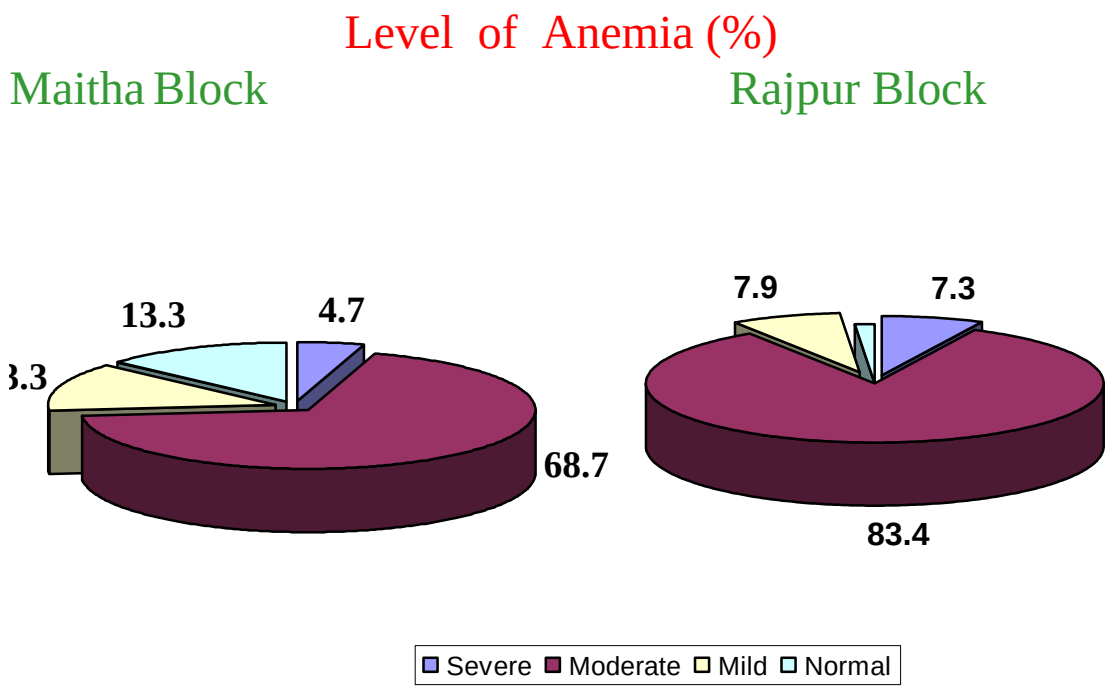
## Level of Anemia/ Hb level among Children

The details on Hb levels/Anemia level of the children of both the blocks have been presented. Level of anemia has been defined as sever anemia (less than 7 of HB level), moderate anemia (for HB level as 7 to .9.9 of HB level), mild anemia (for HB level as 10 to 10.9) as per the WHO classification. Such type of anemia has been defined as the *Any type* of anemia belonging to these three categories. Distribution on Children by Age and Sex according to their level of Anemia / Hb level in both the blocks have been presented as below. The sample sizes of sub groups like age and sex are inadequate and the estimates of anemia for these sub groups may not be strictly valid and should be viewed with caution. This comment also applies to prevalence of different grades of anemia.

**Table : Hb levels/Anemia level of the children by age and sex**

| | N | >11 Normal | <11 Any Anemia | 10-10.9 Mild | 7-9.9 Moderate | <7 Severe |
|---|---|---|---|---|---|---|
| | | Maitha Block | | | | |
| Age (Yrs) | | | | | | |
| 1-2 | 22 | 13.6 | 86.4 | 13.6 | 68.2 | 4.5 |
| 2-3 | 49 | 12.2 | 87.8 | 18.4 | 63.3 | 6.1 |
| 3-4 | 37 | 10.8 | 89.2 | 10.8 | 78.4 | 0 |
| 4-5 | 42 | 16.7 | 83.3 | 9.5 | 66.7 | 7.1 |
| SEX | | | | | | |
| Male | 83 | 12.0 | 88.0 | 21.7 | 62.7 | 3.6 |
| Female | 67 | 14.9 | 85.1 | 3.0 | 76.1 | 6.0 |
| **TOTAL** | **150** | **13.3** | **86.7** | **13.3** | **68.7** | **4.7** |
| Rajpur Block | | | | | | |
| Age (Yrs) | | | | | | |
| 1-2 | 23 | 0 | 100 | 8.7 | 78.3 | 13.0 |
| 2-3 | 28 | 3.6 | 96.4 | 3.6 | 89.3 | 3.6 |
| 3-4 | 49 | 0 | 100 | 6.1 | 89.8 | 4.1 |
| 4-5 | 51 | 2.0 | 98 | 11.8 | 76.5 | 9.8 |
| SEX | | | | | | |
| Male | 78 | 2.6 | 97.4 | 14.1 | 80.8 | 2.6 |
| Female | 73 | 0 | 100 | 1.4 | 86.3 | 12.3 |
| **TOTAL** | **151** | **1.3** | **98.7** | **7.9** | **83.4** | **7.3** |

Normal children were those whose HB level has been observed more than 11. It has been observed that in Maitha block, about 87 percent of children were having any type of anemia of which about 5 per cent were having severe anemia, about 69 per cent moderate and 13 per cent having mild level of anemia. Any type of anemia was found lowest in the age group 4-5 years and highest in 3-4 years. Severe anemic children were females as compared to male children. As regards to Rajpur block, it has been observed that about 99 per cent of the children were having any type of anemia of which 7 per cent were severe anemic, about 83 per cent moderate and about 8 per cent were having mild anemia. Female children were more severe anemic as compared to male children.



## Level of Vitamin - A deficiency

In this chapter, Level of vitamin A deficiency among the children in both the blocks has been discussed. As per the WHO, the children having serum level (less than 9.9) were classified as severe vitamin A deficient and Serum level between (10-19.9) as mild vitamin A deficient. Level of vitamin A deficiency according to sex and Age of the children has been presented as:

**Level of vitamin A deficiency (**Serum Level <19.9*) **of the children**

| | Maitha | Rajpur |
|---|---|---|
| **AGE(YEARS)** | | |
| 1-2 | 40.9 | 43.5 |
| 2-3 | 42.8 | 50.0 |
| 3-4 | 24.3 | 63.3 |
| 4-5 | 40.5 | 60.8 |
| **SEX** | | |
| MALE | 33.7 | 65.4 |
| FEMALE | 41.8 | 47.9 |
| **TOTAL** | **37.3** | **57.0** |

It has been observed that about 37% of the children were having vitamin A deficiency in Maitha block and 57% in Rajpur block. The serum retinal level less 10 were observed about 6% in the Maitha block.

## Presence of worm load

In this chapter, Presence of worm load through laboratory tests and prevalence of clinical signs have been discussed. Stool of the children was collected to examine the presence of worm load in the stool. For the purpose, the stool of children was collected from both the blocks. Table 13 gives analysis on the basis of their stool examination.

**Presence of worm load of children by age and sex**

| **Maitha (%)** | | Rajpur (%) | |
|---|---|---|---|
| **AGE (Yrs)** | | **Age (Yrs)** | |
| 1-2 | 63.6 | 1-2 | 17.4 |
| 2-3 | 77.6 | 2-3 | 28.6 |
| 3-4 | 81.1 | 3-4 | 16.3 |
| 4-5 | 52.4 | 4-5 | 19.6 |
| **SEX** | | **SEX** | |
| MALE | 67.5 | MALE | 24.4 |
| FEMALE | 71.6 | FEMALE | 15.1 |
| **OVERALL** | **69.3** | **OVERALL** | **19.9** |

As regards to the presence of worm load, About 69% of the children were having this history in Maitha block and only 20% in Rajpur block. The presence of worm load was observed more among male as compared to females in Rajpur block.

## Prevalence of Clinical Signs

The information on Prevalence of Clinical Signs is being presented in Table

**Information on Prevalence of Clinical Signs (%)**

| Clinical Signs | Maitha | Rajpur |
|---|---|---|
| Kwashiorkor (Hair sign) | 13.2 | 19.7 |
| Marasmus | 0.9 | 0.2 |
| Bitot Spot (Conj. Xerosis) | 6.2 | 4.2 |

Kwashiorkor (Hair sign) was higher among the children in both the blocks (19 per cent in Rajpur and 13 per cent in Maitha) followed by Bitot Spot (Conj. Xerosis). Children with Corneal Opacity and Corneal Xerosis were not seen in any of the block. Marasmus is very rare in both the blocks and this percentage is lower than the district level percentage. The occurrence of Bitot's spot was negligible at district level but mild percentage was observed at block level. This percentage was higher in Maitha block as compared to Rajpur block.

## Nutritional Status of Pre School Children

The **severe** and **moderate** grade of malnutrition (body weight less than 75% of standard) which constituted the high Risk group from health point of view was 51% in Rajpur block and 57% in Maitha block and was 48% at the district level (NIN/IASDS).

**Nutritional Status of Pre School Children (1-5 Yrs.) (%) - (NCHS standard)**

| Nutritional Status | | MAITHA BLOCK | | | RAJPUR BLOCK | | |
|---|---|---|---|---|---|---|---|
| | | Male | Female | Overall | Male | Female | Overall |
| SEVERE | <60 | 11.9 | 13.8 | 12.7 | 10.8 | 14.4 | 12.5 |
| MODERATE | 60-75 | 44.2 | 44.4 | 44.3 | 41.0 | 36.0 | 38.6 |
| MILD | 75-90 | 26.5 | 22.1 | 24.5 | 29.0 | 28.3 | 28.7 |
| NORMAL | >90 | 17.4 | 19.8 | 18.5 | 19.2 | 21.3 | 20.2 |

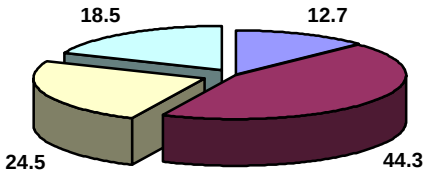
The percentage of severely malnourished children is quite high at block level as compared to the district level. The percentage of children with moderate grade of malnutrition was nearly same at block and district levels.

# Nutritional Status (%)

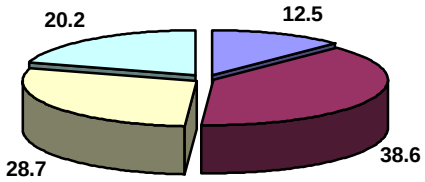
## Pre School Children (1-5 Years)

## Gomez Classification(NCHS standard)

Maitha Block




Rajpur Block




Severe <60 Moderate 60-75 Mild 75-90 Normal >90

## 2. Base Line Survey of CHAYAN rural component of RACHN Program

The study was undertaken on the request of CARE and in continuation to the earlier study ***Final Evaluation of Integrated Nutrition and health INHP*** with the objective to study a baseline for various components of Chayan through quantitative and qualitative methods and behavior surveillance. The study was to be carried out in the four states viz; UP,Rajasthan, Chhattisgarh and Jharkhand with the specific objectives to understand and establish baseline regarding Knowledge, attitude and practices related to family planning among rural and urban couples, awareness and knowledge about RTI/STI and HIV/AIDS among women and men in the reproductive age group in the rural and urban areas, behaviors and practices related to adolescent reproductive health. The high risk population would also be targeted for knowledge about practices in select cities. Underlying causes (especially gender) associated with the poor reproductive health status, particularly of women and vulnerable groups, The existing levels of knowledge, attitude and skills of the service providers both in private and public sector and on Birth Preparedness and Newborn Care (especially thermal protection) as an additional baseline for INHP II.

The methodology were considered under the assumptions that the population universe for the survey is the INHP operational areas in each of the four states. Hence, AWCs and blocks mentioned are only those where INHP is currently in operation. The basis for calculating the sample size is contraceptive prevalence rate (CPR) for modern spacing methods (Condom, Pill, IUCD and Injectables). The existing level of this CPR ranges between three percent to 17 percent in the rural and urban areas of the four states (source: NFHS II, 1998-99). It is assumed that over its life the project will be able to increase this CPR by at least three percentage points. The estimates will be obtained at five percent level of significance and with 90 percent power. Separate estimates are required for demonstration sites and other AWCs in rural areas. Considering the fact that DS are only 10 percent and the remaining 90 percent are the other AWCs, a design effect of 1.5 will be taken into account while calculating the minimum sample size. The sample size will be boosted by five percent for non-response.
The draft of the final Report was prepared on the basis of reports written by consulting Organizations.

## 3. Baseline Survey in Trans-Yamuna Area for Preparation of Healthy City

The Government of National Capital Territory of Delhi felt a need to have base line data on various aspects including mortality and morbidity before starting intervention programmes. The information gathered would be utilized for planning and implementation of various intervention programmes to improve the health status of the Trans-Yamuna area under Healthy Cities Project of WHO. Towards this endeavor, the project on ' **Baseline Survey in Trans-Yamuna Area of Delhi for Preparation of Healthy** City' was undertaken by I.R.M.S., New Delhi. It was sponsored by the Directorate of Health Services, G.N.C.T. of Delhi.

**Objectives of the Study:**

i. Mortality and Morbidity Pattern Including Water Borne Disease
ii. Socio-Economic Status of Residents
iii. Personal Hygiene, Sanitation and Other Environmental Conditions
iv. Health Awareness among the Community
v. Present Health Infrastructure & its Utilizations

**Methodology:**

Twenty thousand households (more than one lakh population) in Trans-Yamuna area were covered with due allocation to different strata viz.

i. Village (Rural + Urbanized)
ii. Resettlement Colonies
iii. Jhuggi-Jhopri Colonies
iv. New Urban Colonies (Planned)
v. Old Urban Colonies

vi. DDA Colonies

- 400 Households were covered from each colony in four rounds of survey i.e. 100 households per round in order to account for seasonal variation to the extent possible.

The households were covered from the strata as mentioned above located in both the districts of Trans-Yamuna Area .

**Salient Findings**

Drainage condition in front of about 60% of the houses was found `open and stagnant'. Household Garbage was found to be disposed in a proper way except in JJ colonies where it was reported to be thrown in streets by a large number of families.

Awareness about dispensaries was quite good in areas where these were located in the colonies or in the nearer areas. People were aware of the hospitals. Dispensaries were reported to be located within 2 km of the distance from the houses.

For usual health problems, the families preferred allopathic treatment and reported consulting mainly private doctors. Awareness about the care of pregnant women was reported quite high particularly regarding health check up and vaccination against tetanus.

The prevalence rate of overall morbidity was estimated as 128 per thousand of population for a duration of one month. The data revealed that the diseases which mainly occurred were Fever, Skin Disorders, Diarrhoeal diseases, Tuberculosis, Acute Respiratory Infections, Chronic Bronchitis, Heart diseases, Hypertension (High Blood Pressure), Arthritis, Diabetes, Renal diseases and Liver diseases. The over all higher prevalence was observed in Jhuggi Jhopri colonies. Higher prevalence of the diseases was observed in almost all the areas as well as in almost all the age groups in areas of South district as compared to that of North. In less than one-year age group, prevalence rate was estimated to be of the order of 124/1000. Higher prevalence of diseases was observed among children up to 5 years of age and among adults after 35 years of age. Higher prevalence of diseases was found more among females (137.5/1000) than among males (119.5/1000). Change in pattern of occurrence of diseases like Diarrhoeal diseases, Acute Respiratory infections, Eye problems, Liver diseases, Skin disorders and Renal diseases were observed over different rounds of survey.

Antenatal care was received by more than 90% of the mothers. It was also found that more than 90% of the mothers received both doses of TT. For Antenatal Care, mothers visited mainly Government facilities. Particularly in New Urban colonies and DDA flat areas, mothers preferred Private Institutions for the same. Immunization coverage of children 12-23 months of age was found to be very high. More than 90% of the children received complete immunization in both the districts and the main source was Government facility.

Information on Place of Delivery conducted revealed that 40% of the mothers went to Government facilities for deliveries and 26% to Private Institutions. In Villages, Jhuggi Jhopri colonies and Resettlement colonies deliveries conducted in homes were still high of the order of 45% - 71%.

It was observed that higher proportion of deaths occurred in earlier age groups (up to 5 years) in Villages, JJ and Resettlement colonies. More than 68% of the deaths in all the areas were found to occur in the older age groups, 45 years and above. The main causes of deaths found were Diarrhoeal diseases, Tuberculosis, Heart diseases, Cancer and Respiratory Diseases.

Only eight maternal deaths were found to occur in both the districts. The causes observed were Pregnancy Related Problems and Meningitis.

The final report of the project has been printed.

## 4. Estimates of Maternal Mortality Ratio in India and its States- A Pilot Study

Maternal mortality level is an important indicator in reproductive health. Though India has made an appreciable progress in improving its overall health status, pace of decline in the maternal mortality ratio (MMR) is slow. Only for the country as whole estimates of MMR are available for 92-93 & 98-99 through National Family Health Survey (NFHS). (NFHS-1) 1992-1993 was the first to provide first national level estimate of MMR as 424 per 100,000 live births preceding the survey. Though not statistically significant but there was an increasing trend between NFHS-1 and NFHS-2, is the cause of concern. The health problems of mothers and newborns arise from the synergistic effects of malnutrition, poor, unhygienic living conditions, infections and unregulated fertility. Bad communication of transport, illiteracy and ineffective public health services lead to inadequate obstetric care. The complications of pregnancies and the births are the leading causes of deaths and disability in women of reproductive age. The levels and causes of maternal deaths may vary across states. So, it is desirable to have the estimates of MMR with causes at state level to monitor the progress of Maternal and Child Care Programs. It would be of immense help for the planning of appropriate and effective strategies to reduce the maternal deaths in the country. With this in view, Department of Family Welfare, Ministry of Health and Family Welfare, Govt. of India commissioned IRMS to undertake a study on the subject.

### Objectives of the main study

- To estimate the maternal mortality ratio at the state level.
- To study the medical as well as socio cultural causes of maternal mortality.

Before undertaking the main study, it was desirable to under take a pilot study to

- Develop and validate the survey instruments.
- Examine the feasibility of the proposed methodology.

### Coverage for Pilot Study

For conducting the pilot study in the following five states were chosen. These states were selected representing high MMR, Medium and Low MMR states one district from each of these states were covered and from the selected districts two PHCs from Rural area one UFS for Urban area were taken.

The following areas were covered in Pilot Study

**Table - Coverage**

| State | District | PHCs (Rural) |
|---|---|---|
| Uttar Pradesh | Mathura<br>Kanpur | Beri, Koshi Khurd Loharan Bhatti, Raja Purva…. |
| Uttaranchal | Dehradun | Raipur, Sahiya |
| Maharashtra | Nasik | Girnare, Warkheda |
| Karnataka | Mandya | Kerakodu, Valagarahalli & Mandya town (urban) |
| Delhi (Slum) | Giri Nagar<br>(Health Centre) | Nehru Place & Okhla Ph-I |

### METHODOLOGY

### Sample Size

Assuming MMR of 400 per hundred thousand live births, a sample of 3.8 lakhs live births was calculated to provide an estimate of MMR at all India level with 95% confidence level and less than 5% margin of error. Assuming a birth

rate of 28.5 per thousand population, this would amount to covering about 1.30 crore population. For conducting the pilot study 8 rural PHCs and 3 urban above mentioned areas were covered.

## Sampling methodology

House to house survey was conducted to collect the information on live birth and maternal death. In addition to house to house survey snowball sampling was conducted to identify the maternal deaths. Five types of survey instruments were used to collect the information namely PHC Schedule, Sub- Centre Schedule, House to House Survey Schedule, Snowballing Schedule and Verbal Autopsy. After identified the maternal deaths verbal autopsy was conducted to collect the detail information on maternal death.

## Findings

The following table presents the demographic profile with estimates of MMR and its standard error with confidence interval for the States/Districts based on PHC covered for MMR study.

**Table - Demographic Profile and Estimates for Pilot Study**

| State Name | Population Covered | Maternal Deaths (for 3 yrs) | Births (for 3 yrs) | Birth Rate (per 1000/yrs) | MMR Per 100,000 | SE (MMR) | Relative Precision (MMR) | 95% CI | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Lower | Upper |
| Uttar Pradesh | 104495 | 57 | 9514 | 30 | 599 | 79 | 13.2 | 444 | 754 |
| Uttranchal | 74547 | 13 | 4377 | 20 | 297 | 82 | 27.6 | 136 | 458 |
| Maharashtra | 80928 | 10 | 5466 | 22 | 183 | 58 | 31.6 | 70 | 296 |
| Karnataka | 71744 | 9 | 4152 | 19 | 217 | 72 | 33.3 | 76 | 358 |
| Delhi (Slum) | 39766 | 5 | 2907 | 24 | 172 | 77 | 44.7 | 21 | 323 |
| Total | **371480** | **94** | **26416** | **24** | **356** | **37** | **10.3** | **284** | **428** |

It has been observed from the table that the overall relative standard error of the estimate of MMR is 10 per cent as assumed. The relative standard error for the states covered ranged from 28 to 45 per cent

except Delhi, which may be lower for the main survey when more population will be covered.

The following table indicates the maternal deaths obtained by snowballing and House-to-House survey.

**Table- Details of maternal deaths: Snowballing and House-to-House Survey**

| State | Snowballing | House to house Survey |
|---|---|---|
| Uttar Pradesh | 57 | 51 |
| Uttaranchal | 13 | 11 |
| Maharashtra | 10 | 10 |
| Karnataka | 9 | 7 |
| Delhi(Slum) | 5 | 4 |
| Total | 94 | 83 |

The above table shows that snowball sampling is more appropriate for capturing the maternal deaths.

**Housing Characteristic Of Maternal Deaths:**

The socio economic characteristics of the maternal deaths are presented in Table

**Table – Housing characteristics**
**Percent distribution of housing characteristic of maternal deaths**

| **Electricity** | **%** |
|---|---|
| Yes | 64.6 |
| No. | 35.4 |
| **Source of drinking water** | |
| Well | 10.4 |
| Hand pump | 33.3 |
| Tap water | 47.9 |
| Others | 8.3 |
| **Drainage in front of the house** | |
| Open and stagnant | 31.9 |
| Open and running | 34.0 |
| Closed | 4.3 |
| No draining system | 29.8 |
| **Toilet facility** | |
| Open field | 93.7 |
| Own pit | 2.1 |
| Others | 4.2 |
| **Type of household** | |
| Kutcha | 20.8 |
| Pucca | 29.2 |
| Semi Pucca | 50.0 |
| **Separate room and kitchen** | |
| Yes | 52.1 |
| No | 47.9 |
| **Type of family** | |
| Nuclear | 65.3 |
| Joint | 34.7 |
| **Caste** | |
| Schedule Caste | 25.8 |
| Schedule Tribe | 11.8 |
| Other Backward Caste | 24.7 |
| Others | 37.6 |
| **Education of woman** | |
| Illiterate | 58.3 |
| Literate (Primary onward) | 41.7 |
| **Occupation of woman** | |
| Housewife | 85.4 |
| Landless labour | 6.3 |
| Others | 8.3 |
| **Number of maternal deaths** | **94** |

About 50 per cent of the maternal deaths were from semi pucca houses and 21 per cent from kutcha houses and remaining were from pucca houses. About 50 per cent houses do not have a separate kitchen in their houses. More than 90 per cent of the maternal deaths used open field for toilet. One third of the maternal deaths does not have electricity in their houses and uses hand pump as a source of drinking water. About 30 per cent of the houses do not have drainage system in front of their houses while 32 per cent of the houses had open and stagnant water system and 34 per cent open and running water systems. 65 per cent have a nuclear type of family. About 60 per cent of the maternal death women were illiterate and more than one fourth of the maternal deaths belong to schedule caste category and 12 per cent belong schedule tribe. More than 80 per cent of women were housewife. It has been

observed from the above finding that most of the maternal deaths low socio economic standard and illiterate women living in unhygienic conditions, which may be the cause of maternal deaths.

**Table – Obstetric Services Care**

| Variables | % |
|---|---|
| **How far is the health facility** | |
| <5 km | 45.5 |
| >5 km | 54.5 |
| | |
| **Type of transport available** | |
| Rickshaw | 26.7 |
| Van | 20.0 |
| No transport | 13.3 |
| Any other | 40.0 |
| | |
| **Treatment not taken** | |
| Due to inadequate transport | 55.6 |
| No male member was available | 33.3 |
| No money | 11.1 |
| | |
| **ANC taken** | |
| Yes | 67.0 |
| No | 33.0 |
| | |
| **T. T. Vaccinations** | |
| Yes | 66.7 |
| No | 33.3 |
| | |
| **Iron tablet** | |
| Yes | 53.5 |
| No | 46.5 |
| | |
| **No of days woman stayed in hospital before her death** | 58.6 |
| 1-2 days | 24.2 |
| 3-4 days | 17.2 |
| 4+ days | |

From the above table, more than forty per cent of the respondent of the maternal death reported that the health facility is 4 to 5 km far from their houses and 13 per cent reported that no transport was available to reach to the health facility. More than 55 per cent reported that due to inadequate facility of transport they could not take proper treatment. And about 15 per cent died on the way. It has been observed that in the hilly area of Uttranchal state, health facility was 40 km away from the village and there was no transport facility available in the village. 33 per cent maternal death did not take ANC care and no T.T. vaccination was taken 47 per cent reported that no iron folic tablet were taken during antepartum period. Due to bad transport system and ineffective health facility may lead to inadequate obstetric care.

In the case of maternal deaths about 59 per cent woman stayed in the hospital for one to two days before the death. As most of the deaths were due to PPH and 47 per cent of the delivery were conducted at home it indicates that after the delivery woman got infection and rush to the hospital and died with in one or two days.

**Discussion on the profile of maternal deaths**

The details of the maternal deaths observed is provided in Table

**Table- Profile of Maternal Deaths –Pilot Study**

| Age Group | UP | Uttarnchal | Delhi | Maha-rashtra | Karna-taka | Total | Per cent |
|---|---|---|---|---|---|---|---|
| <20 | 9 | 1 | | 3 | 2 | 15 | 15.96 |
| 20-24 | 18 | 2 | 3 | 6 | 3 | 32 | 34.04 |
| 25-29 | 16 | 5 | 1 | | 4 | 26 | 27.66 |
| 30-34 | 5 | 3 | 0 | | | 8 | 8.51 |
| 35-39 | 8 | 1 | 0 | 1 | | 10 | 10.64 |
| 40+ | 1 | 1 | 1 | | | 3 | 3.19 |
| Total | 57 | 13 | 5 | 10 | 9 | 94 | 100.00 |

**Parity**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 8 | 2 | 1 | 3 | | 14 | 14.89 |
| 2 | 11 | 2 | 1 | 3 | 6 | 23 | 24.47 |
| 3 | 9 | 2 | 2 | 1 | 3 | 17 | 18.09 |
| 4 | 10 | 2 | 0 | 2 | | 14 | 14.89 |
| 5 | 19 | 5 | 1 | 1 | | 26 | 27.66 |
| Total | 57 | 13 | 5 | 10 | 9 | 94 | 100.00 |

| Caste | UP | Uttarnchal | Delhi | Maha-rashtra | Karna-taka | Total | Per cent |
|---|---|---|---|---|---|---|---|
| SC | 14 | 7 | | 2 | 2 | 25 | 26.60 |
| ST | 0 | 1 | | 8 | 2 | 11 | 11.70 |
| OBC | 20 | | 2 | | 1 | 23 | 24.47 |
| Others | 23 | 5 | 3 | | 4 | 35 | 37.23 |
| TOTAL | 57 | 13 | 5 | 10 | 9 | 94 | 100.00 |

**When did death occur**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Ante Natal | 17 | 4 | 1 | 0 | | 22 | 23.40 |
| During Child birth | 4 | 1 | **0** | 2 | | 7 | 7.45 |
| Post Natal | 36 | 8 | 4 | 8 | 9 | 65 | 69.15 |
| Total | 57 | 13 | 5 | 10 | 9 | 94 | 100.00 |

**Place of death**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Home | 10 | 6 | | 5 | 2 | 23 | 24.73 |
| Institution | 36 | 7 | 3 | 3 | 6 | 55 | 59.14 |
| On the way to Hospital | 11 | | 2 | 2 | | 15 | 16.13 |
| Total | 57 | 13 | 5 | 10 | 8 | 93 | 100.00 |

**Place of delivery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Home | 29 | 7 | | 7 | 1 | 44 | 46.81 |
| Institution | 12 | 2 | 4 | 3 | 7 | 28 | 29.79 |
| Not Delivered | 16 | 4 | 1 | | 1 | 22 | 23.40 |
| **Total** | **57** | **13** | **5** | **10** | **9** | **94** | **100.00** |

**Delivery conducted by whom**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Trained Dai | **4** | 1 | | 1 | | 6 | 8.33 |
| Untrained Dai | 21 | 4 | | 6 | 1 | 32 | 44.44 |
| ANM/LHV | 1 | 1 | | | | 2 | 2.78 |
| Nurse | 3 | | | | 1 | 5 | 6.94 |
| Doctor | 10 | 2 | 4 | 1 | 6 | 23 | 31.94 |
| Others | 2 | 1 | | 1 | | 4 | 5.56 |
| **Total** | 41 | 9 | 4 | 10 | 8 | 72 | 100.00 |

**Cause of Death**

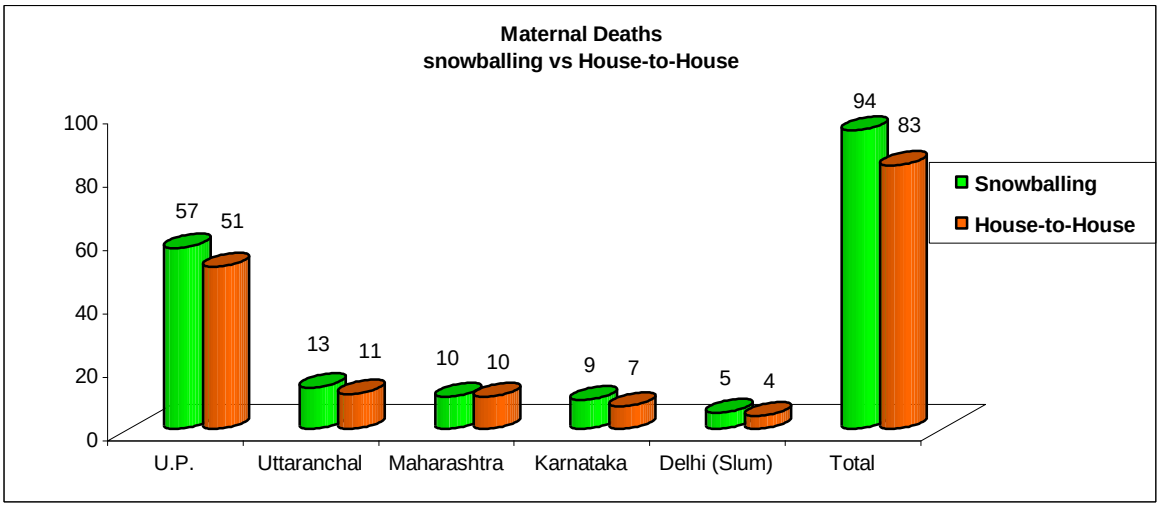
| | **UP** | **Uttarnchal** | **Delhi** | **Maha-rashtra** | **Karna-taka** | **Total** | **Per cent** |
|---|---|---|---|---|---|---|---|
| P.P.H. | 11 | 1 | | 2 | 2 | 16 | 17.02 |
| Post Partum Septicemia | 7 | 2 | 1 | 2 | | 12 | 12.77 |
| Anemia | 7 | 2 | 1 | | 2 | 12 | 12.77 |
| Hemorrhage during pregnancy | 2 | 2 | 1 | | | 5 | 5.32 |
| Obstructed labour | 2 | 1 | | | | 3 | 3.19 |
| Retained Placenta | 4 | | | 1 | 2 | 7 | 7.45 |
| Eclampsica Ante Partum | 0 | | | 1 | | 1 | 1.06 |
| Eclampsica Post Partum | 1 | 1 | | 2 | 2 | 6 | 6.38 |
| Post Operation complication | 2 | 1 | 1 | | 1 | 5 | 5.32 |
| Hypertensive disorder of pregnancy | 0 | 1 | | | | 1 | 1.06 |
| Hepatitis coma | 1 | | | 1 | | 2 | 2.13 |
| Depression | 1 | | | 1 | | 2 | 2.15 |
| Rupture uterus | 3 | | | | | 3 | 3.23 |
| Embolism | 1 | | | | | 1 | 1.08 |
| Tetanus | 1 | | | | | 1 | 1.08 |
| Asthma | 2 | | | | | 2 | 2.15 |
| Food poisoning | 1 | | | | | 1 | 1.08 |
| HIV+ | 1 | | | | | 1 | 1.08 |
| Accident | 3 | | | | | 3 | 3.23 |
| Non obstetric | 6 | 1 | 1 | | | 8 | 8.60 |
| Suicide | 1 | | | | | 1 | 1.08 |
| **Total** | **57** | **13** | **5** | **10** | **8** | **93** | 100.00 |

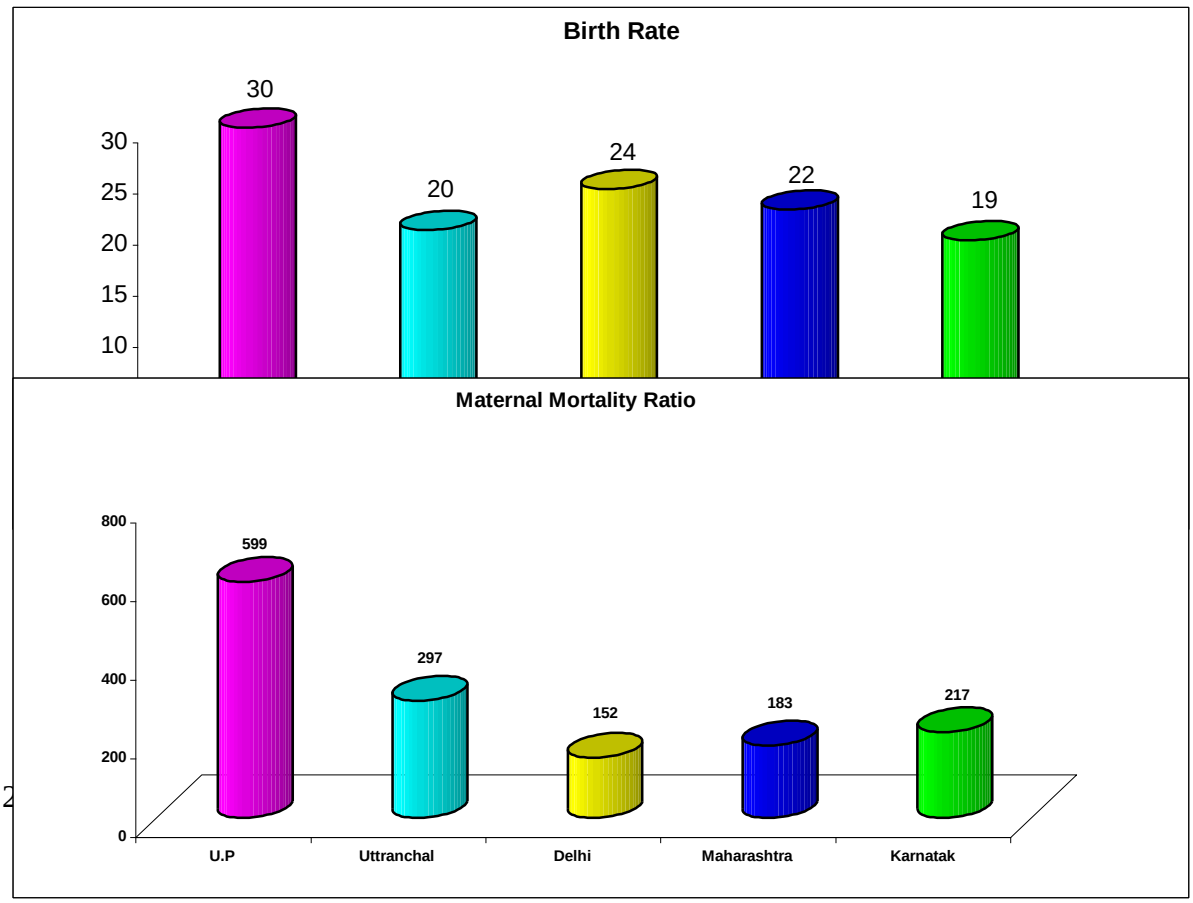
It has been observed from the above table that 50 per cent of maternal deaths occurred before the age of 25 years of which 40 per cent had parity one and 24 per cent died during antenatal. About 47 per cent deliveries were conducted at home and 45 per cent of the deliveries conducted by untrained dais.

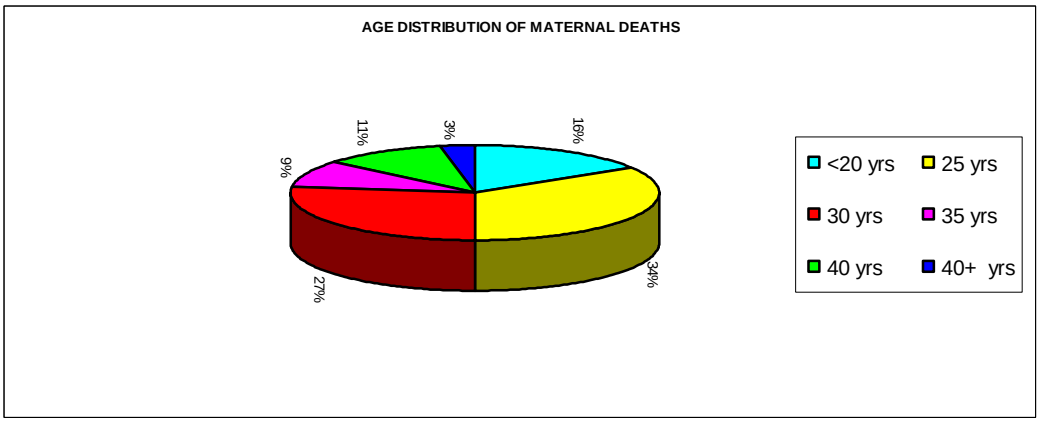
The main causes of deaths were observed as post partum hemorrhage, septicemia and anemia (Table – 8). It has also been observed that 7.5 per cent of the maternal deaths reported to be due to retained placenta and about 8.6 per cent due to non-obstetric reasons.

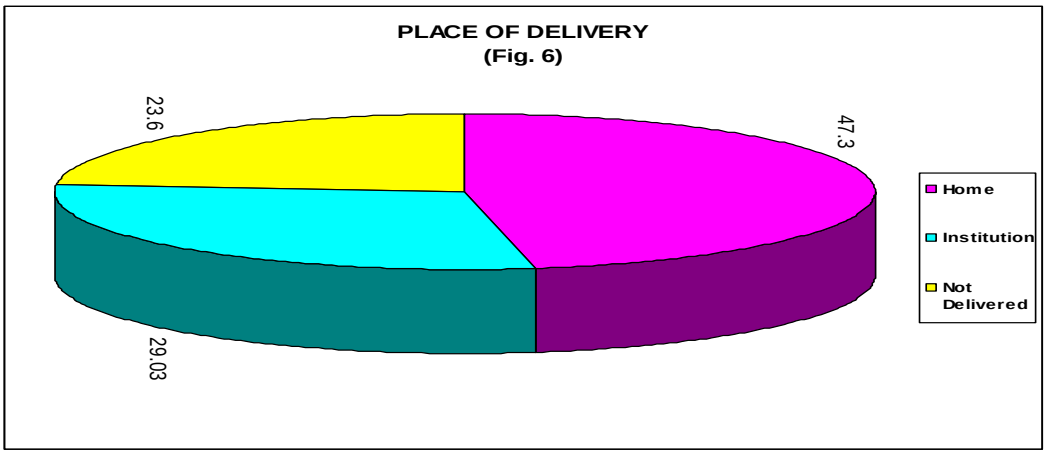
**Salient findings:**

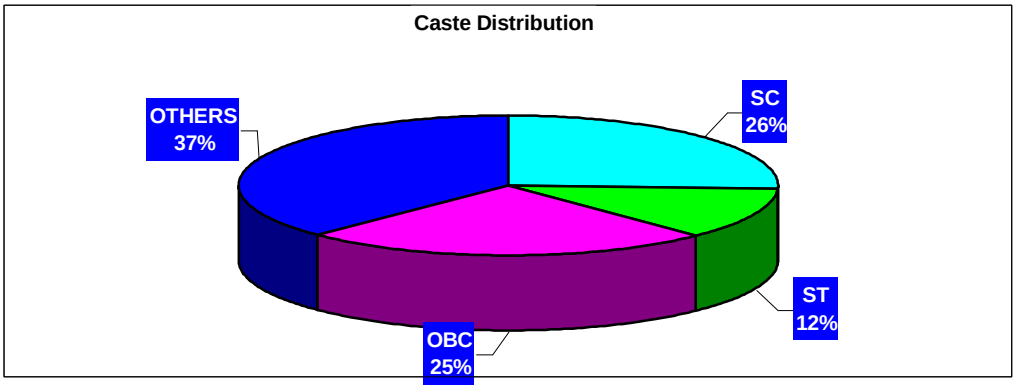
- Snowballing technique captures maternal deaths, which are missed in the House-to-House survey. Pilot survey revealed that such omissions are over 10 percent.
- The estimates of MMR and birth rate for the states covered in Pilot Survey, though based on small samples, provide estimates comparable with these from other sources.
- The majority of maternal deaths occurred to women of younger age group and with birth of first parity. This has programmatic implications /lessons
- More than three fourth of the maternal death occurred to the mothers below the age 30 years.
- More than 40% the deaths were at parity, one & two which may be due to early marriage age.
- The main cause of death was observed to be PPH (17%), post partum septicemia (13%) and anemia (12%).
- 24% of the deaths were observed to be during ante natal period, about 70% deaths in post natal period and 7 % were found to be during delivery.
- 45% of the deliveries were conducted by untrained dais.
- More than 60 percent of the maternal deaths occurred SC, ST and OBC households.

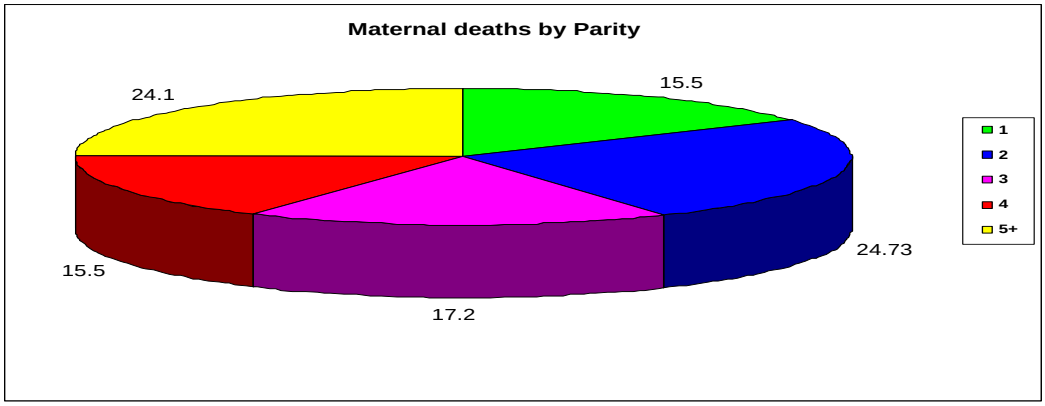


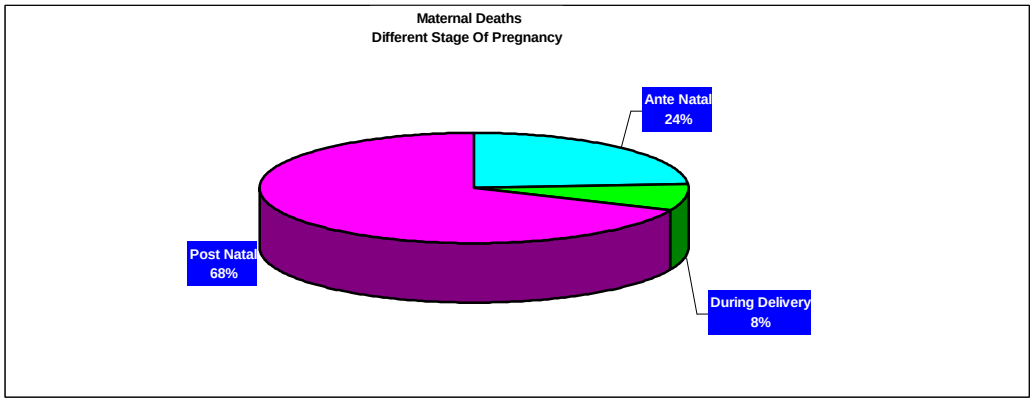



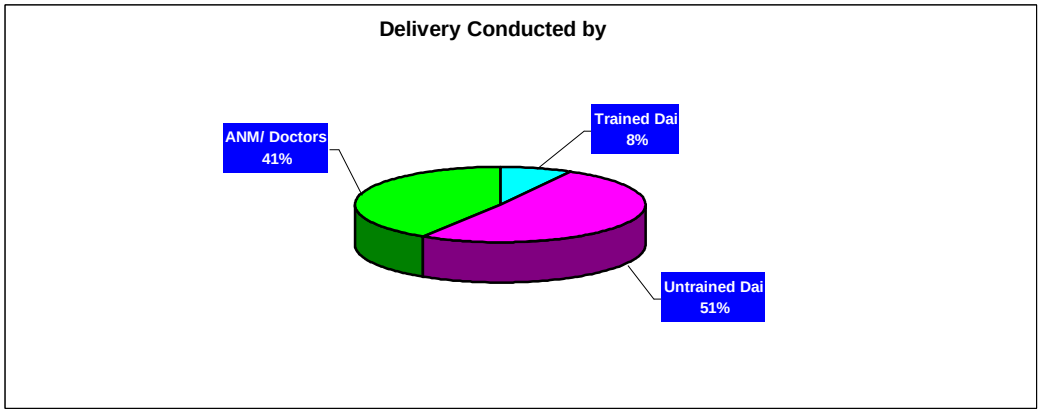

AGE DISTRIBUTION OF MATERNAL DEATHS
11%
3%
16%
9%
27%
34%
<20 yrs
25 yrs
30 yrs
35 yrs
40 yrs
40+ yrs


PLACE OF DELIVERY
(Fig. 6)
23.6
47.3
29.03
Home
Institution
Not Delivered


Caste Distribution
OTHERS 37%
SC 26%
ST 12%
OBC 25%


Maternal deaths by Parity
24.1
15.5
15.5
24.73
17.2
1
2
3
4
5+




## 5. Birth and Death Registration System in India: A Pilot Study

Civil Registration System in India is a system capable of providing latest, continuous and more reliable information on vital events like births & deaths at whatever geographic or administrative level required. The information could be quite useful in making future projections and planning various programmes for the people. Unfortunately, some states/ union territories are not paying due attention for various reasons towards the functioning of the system. Due to which under reporting of both the events has been observed by the Office of the Registrar General of India that is the nodal agency for monitoring the registration work at national level. To make better use of the information available on births and deaths through this system, it is necessary that it should be able to provide the complete and more reliable information and hence an improvement is needed in registration of the events.

Towards this endeavor, the Institute for Research in Medical Statistics, Indian Council of Medical Research, New Delhi undertook this study in the two states of India, Uttar Pradesh where both birth and death registration was reported to be very low and the other, Punjab where it was reported to be high, to find out the reasons both for registration as well as for non –registration.

### Objectives

1. To review the existing systems of registration in the two states
2. To suggest modifications for making registration system more effective

### Research design and methodologies

The study was conducted in two states, one U.P., having poor registration and the other, Punjab having the high registration as estimated by R.G. Office. Two districts from each state and ten villages from each district were selected. Information was collected on Birth and Death events that occurred during the year 2002 and up to 31st March, 2003 in the selected villages.

The study focused mainly on studying events. Snow Ball Sampling was used for identifying the events.

Major variables for data collection were, Awareness of the system, Attitude towards the system, Reasons for registration, Reasons for non- registration, Information on difficulties faced by the Registration Staff. Separate questionnaires were designed for each aspect.

### Salient Findings

Information was collected on 564 births and 136 deaths in the two districts of U.P. and 328 births and 139 deaths in the two districts of Punjab.

It has been observed that knowledge about birth registration was among about 6% of the families where birth occurred in the districts of U.P. and among about 97% of the families in the districts of Punjab. Registration of births was of the order of 1% in U.P. and of the order 92% in Punjab.

In U.P., about 19% of the families where death occurred had some knowledge about registration of deaths where as in Punjab, about 92% of the families were found to be aware of the same. Registration of deaths was of the order of 14% in U.P. and of the order of 78% in Punjab.

In U.P., it was observed that registration of births and deaths was not as a usual practice but only need based where the certificate was required. In Punjab, both birth and death registration was 'As a usual practice in the area' but the families received the certificates only when the same were needed.

The system of registration was observed to be almost non-functional in U.P. due to lack of funds at district level as reported, non-availability of the required stationery lack of coordination among different functionaries and almost no interest of the Gram Panchayat Vikas Adhikari in the registration work. The families had no knowledge of registration as well as they did not feel any necessity for the same in U.P. The Notifier system was not at all functional in U.P. whereas, the success of the system in Punjab was due to the Chowkidar working as notifier.

The functionaries at Registrar and Notifier level did not receive any formal training in birth and death registration.

## DEVELOPMENT OF DEMOGRAPHIC DATABASE FOR MICRO LEVEL (DISTRICT) PLANNING IN INDIA: EXPLORATION OF ALTERNATIVE DATA SOURCES

Objective

Relevant datasets on socio-demographic and economic indicators is an essential requirement for local self government as Panchayati Raj Institutions are expected to participate more and more in planning and programme implementation. Hence, the objective of the project is to develop demographic database for micro level planning in India using alternative data sources.

Data

The data has been compiled from various sources such as Census, National Sample Surveys and Rapid Household Surveys under Reproductive and Child Health Programme and estimated different components of population growth, viz. population, fertility and mortality using indirect techniques. The database is based on latest information available at the district and compiled from 2001 Census of India, Rapid household survey (RHS/RCH), 1998-99 and

published reports of CMIE, 2000. The report has commented on the status of various data sources available at National, State at district level. Civil Registration System is the only source of data on birth and death registration, but they are found to be deficient in terms of coverage. A ready reference of the status of CRS is provided in the report.

Output

There are two basic requirements for the selection of variables in computation of composite index. First, the variable should have a direct link with the level of development and other relates to measurement error. At district level, a number of the indicators will be affected due to low level of infrastructure development, its geographical location, proximity to large cities/towns. A variable may have direct link with development but its measurement at the district level sometimes becomes difficult, particularly so in developing countries like India.

The indicators are presented in three ways. First, indicators have been derived from the raw data. Second, indicators are estimated by using in-direct methods from the available raw data and third indicators are based on set of composite indices, derived by using a number of variables related to population, gender, socio-economic, reproductive and child health utilization. The report also contains the infrastructure development index computed by CMIE, whereby districts are ranked as per the value of the composite index.

## ONGOING STUDIES

### 1. Impact Assessment of ICDS Food Fortification in the states of Uttar- Pradesh, Madhya Pradesh and Uttranchal.

To determine the baseline prevalence of iron and Vitamin-A deficiencies among children 6-59 months using clinical and biochemical indicators in the Kanpur Dehat district of UP where the fortification of ICDS food is due to take place. Subsequently monitoring of the supplementation has to be documented and end line evaluation done to evaluate the impact.

A survey was planned to assess the impact of fortified supplementary food under ICDS on the prevalence of micronutrient Deficiencies/malnutrition (Vitamin-A & Iron) among the ICDS beneficiaries in Kanpur Dehat district of Uttar Pradesh. The sample could be selected in the form of 30 clusters and 25 children per cluster. However, instead of 25 children per cluster, it was decided that about 50 children should be taken for clinical assessment for Bitots Spot and Anemia while for sub clinical manifestation of nutritional deficiencies, the blood sample could be taken for much smaller group i.e, for 10 children. Thus, Sample size would be 1500 for clinical assessment and 300 for blood/ biochemical test.

For logistic reasons and proper monitoring, it was decided to restrict the sample in two blocks from the district. A sample of control with half sample size will be taken from the same district but from other blocks not covered under ICDS fortification. In case there are no such blocks then the control will be from comparable district in the adjoining state i.e, Rajasthan by ensuring that the control and study group broadly match with each other indicators like geographic and Demographic profile of the area, poverty, prevalence of malnutrition, literacy levels and other development parameters. So in the control area, the sample would be half in the form of 15 clusters.

### 2. ISM&H Beneficiaries covered under CGHS and Selected Teaching Hospitals Attached to ISM&H Colleges

On the request of Department of ISM&H, Ministry of Health and family Welfare, the study " ISM*&H Beneficiaries covered under CGHS and Selected Teaching Hospitals attached to ISM&H Colleges"* was undertaken with the following objectives:

1. To assess the reasons for acceptability / non-acceptability of ISM&H facilities under CGHS by the beneficiaries.
2. To know the level of availability of facilities/medicines in ISM&H CGHS dispensaries.
3. To assess the perception of CGHS beneficiaries towards ISM&H and their suggestions for improvements.
4. To know the level of availability / facilities in teaching hospitals attached to the ISM&H Colleges & perception of indoor / outdoor patients of these hospitals towards ISM&H. Infrastructure facilities available in these selected colleges will also be assessed.

A survey on the utilization /non utilization of ISM&H facilities under CGHS by the beneficiaries in all dispensaries in 14 sites (Hyderabad, Patna, Ahmedabad, Mumbai, Nagpur, Pune, Banglore, Jaipur, Chennai, Lucknow, Allahabad, Kanpur, Meerut, Calcutta) and 10 dispensaries in Delhi has to be undertaken. As such, Information will be collected on Resource/ Facility available Qualitative & Quantitative Assessment, Provider's perception about the facilities and beneficiaries of 57 ISM&H and 80 Allopathic dispensaries. Client perception about the facility and utilization of ISM&H among those who are utilizing the ISM&H services. Detailed information on about 50 patients through exit interviews who are attending CGHS ISM&H dispensaries as well as from the CGHS- Allopathic dispensaries will also be collected**.**

## 3. Determination of Risk Factors Associated with Maternal Mortality in Municipal Corporation of Delhi: A Community Based Case Control Study:

In developing countries including India, pregnancy complications and childbirth related deaths are believed to be the major causes of death among women in their reproductive ages. Though the situation is changing with the advent of the safe methodology initiatives but the evidence of declining maternal mortality at the time when India's population is becoming increasingly masculine, seems odd and needs further investigation. In view of this , a case control study was submitted in MOHFW to determined the epidemiological risk factors associated with maternal deaths in urban slums of Delhi.

The objectives of the study are

1. To identify maternal deaths and the risk factor associated with MMR in JJ colonies of Delhi.
2. To discover the socio-economic, cultural and behavioral factors behind such maternal deaths.
3. To estimate the relative risk of maternal deaths due the various risk factors identified.

### Sample Size

Since the total population covered under JJ colonies in Delhi is around 12 lakhs, assuming birth rate to be 35 per 1000 population, there will be about 42000 births during a year. Further, assuming MMR to be 500 per 1,00,000 live birth it is expected to get approximately 150 maternal deaths during the past two years of the conduct of the survey. So it is proposed to cover 150 maternal deaths (cases) and 450 controls in the case-control design. Therefore a total of 600 women will be taken for the entire investigation.

### Methodology

To meet the above objectives a retrospective case-control design has been taken in which a group of women who died due to pregnancy (maternal deaths) called cases and a group of women who survived after childbirth called controls are taken for the case-control study. The information on the maternal deaths which occurred during the last two years will be collected from the locality, mentioned above, from the registers maintained at health centers under IPP –VIII. Snowball sampling has also been conducted to identify the maternal deaths through the help of key informant as ANM and Basti Sevika from the IPP-VIII health centres. All the health centres covered under the IPP-VIII has been covered. In addition to these health centres list of maternal deaths from AIIMS , Safdarjung hospital and NDMC office have also been collected.

### Current Status:

Fieldwork is at the verge of completion. Interim analysis has been done and the findings were presented in last year SAC meeting. A total of 175 maternal deaths were identified but data has been collected for 131 maternal deaths due to non-availability or incomplete addresses of maternal deaths. Repeated visits have been made to locate the houses but of many of the maternal deaths were not located. 393 controls were also covered. Data cleaning and data entry has been completed for the collected data. Analysis of data is in progress and report writing is also in progress.

1. Provided comments on the sampling design and sample size of the research project on "ECA study to estimate rates of prevalence and incidence of specific mental disorders…" of Dr. D.Mohan, Prof and Head, Deptt. Of Psychiatry, AIIMS

2. Provided comments on study of the epidemiology of Tuberculosis in India,using Molecular methods by Dr.(Mrs.) UrvashiB.singh, AIIMs, New Delhi

3. Provided comments on the research project entitled" Analysis of Medical Data with selection bias and missing information " of an Etniopian national.

4. Provided comments on research project entitled" Proposal for establishment of Hospital based National surveillance systems for rotavirus Disease and Strains in India " of Dr. M.K.Bhan, AIIMS"

## 4. Examination of WHO guidelines for exclusive breastfeeding in relation to child survival. The study funded by the National Population Commission, Government of India.

**Background**: A number of research studies in India and aboard have established that there is a positive association between breastfeeding and infant survival. In this light the World Health Organization (WHO) has recommended a set of guidelines for infant feeding in developing countries (WHO 1991, Page 4). One of the research document based on analysis of the India's National Family Health Survey, 1992 – 93 (NFHS – 1) has assessed the factors that effects of exclusive and non-exclusive breastfeeding on infant mortality (Anandaiah and Choe, 2000). According to this analysis, both exclusive and non-exclusive breastfeeding lowers the mortality during early infancy but surprisingly it is found that the breastfeeding supplements is more beneficial than exclusive breastfeeding even for children at very young ages (below four months). The arguments given for such finding is that mothers who are poorly nourished and in poor health themselves may not provide adequate breast milk for their growing infants. The results have therefore questioned the WHO recommendations that the children should be exclusively breastfed up to age 4 – 6 months for the developing country like India.

On this contest, the present study plan with specific objectives as:

1. The main objective of the study is a through scrutiny of the reliability of infant death data and then an in-depth investigation to re-examine the effects of exclusive breastfeeding, non-exclusive breastfeeding, and not breastfeeding on mortality over different segments of post neonatal age.
2. To compare the findings with those of Anandiah and Choe (2000).

**Progress**:
A set of explanatory variables (residence, mother's education, mother's occupation, standard of living index, Mother's age at child birth, Length of the preceding birth interval, Size of the child at birth, and Antenatal and natal care) along with duration of breastfeeding was selected to use in univariate and multivariate analysis. We have completed data analysis and report writing is in progress.

## 5. Causes of Death by Verbal Autopsy

***Background**: The reliable data on causes of death is essential for a meaningful planning of health care and allocation of resources. In India, however, information on deaths in general and their causes in particular has been quite inadequate. The present study plan with specific objectives:*

1. To assess probable causes of deaths in male and female population in Rajasthan and Bihar. and

2. to study the socio-economic profile of the households with deaths in the study population.

**Survey Designed:** For both the states, one district from each SRS (geo-physical sub-region in Bihar / region in Rajasthan) is selected. The 1991 Primary Census Abstract was used as sample frame. Thirty PSUs (villages in Rural and CEBs in town) were selected from each selected district using stratified PPS methodology. In this way six districts from each state were selected. Number of rural & urban PSU's was selected on the basic of population size.

**Progress**:

A set of survey instruments (Still Birth, Neonatal, Child Mortality (29 days - < 5 years, Adult mortality (>= 5 years), Maternal death) was developed and pre-tested by trained Doctors as well as social scientists in both rural and urban areas.

As recommended by the task force that data on elicit cause of death for the deaths occurred during January to June will be collected in first round and team will revisit same PSUs to get information on cause of death for the deaths during next six months in same year in second round.

As I am responsible only for Bihar state, Training (both class room and field practice) was organized for field teams (Doctors and social scientists) at Patna. The first round fieldwork of the study has been completed in all six districts of Bihar. Data entry, data validation is completed and analysis is in progress. Also the second round orientation training programme was organized for same field teams and one district fieldwork is in progress.

## Methodology

For both the states, One district from each SRS (geo-physical sub-region in Bihar) / region (in Rajasthan) is selected. The 1991 Primary Census Abstract was used as sample frame. 30 PSUs (villages in Rural and CEB in towns) were selected from each selected district using stratified PPS methodology. In this way six district from each state were selected. Rural & urban PSU's were selected on the basic of population size. Details distribution is given as under

## Progress Of The Study

It was recommended in the task force that In phase-I 30 PSUs would be covered to elicit cause of death for the deaths occurred during the last six months from the date of survey. In phase-II Field team will revisit these selected areas to get information on cause of death for the deaths during next six months in same year. The first round of the study has been completed in all the districts of Bihar and Rajasthan. Data analysis is in progress.

## 4. Risk factors associated with development of cervical cancer with reference to biosocial behavior- An exploratory study

**Progress**

As per the recommendations of the scientific advisory committee the Institute had undertaken the study on role of biosocial behavior in the process of cervical carcinogenesis. Cancer of the uterine cervix is one of the leading malignancies seen in Indian women. In view of this, the health care programs might have to be redefined. Most of the data are available from the developed countries are available from the developed countries and rely mainly on cytology screening programs on regular basis. In view of the paucity of resources the strategy of mass scale screening cannot hold for developing countries hence there is a need to also look at primary prevention approach by life style modification. Hence there is a need to look at the various risk factors relating to the disease. The review work dealt with the risk factors associated with the disease in Indian situation and other developing and developed countries. The factors responsible for cervical carcinogenesis are early sexual debut, multiple sexual partners, menstrual hygiene and unprotected sex. The tobacco habit has also been considered as an important candidate in causation of cervical neoplasms. These factors are amenable to modification hence could be incorporated in the cancer control program through intensive health education This review related to the various risk factors related with cervical cancer and its relevance in developing countries including methodological issues has been accepted for publication in *Indian journal of Cancer.*

The review of the work relating to cervical cytology screening strategies in developing countries is in progress. The work would include issues related with mass scale cytology screening, clinical down-staging selective cytology and HPV screening. The work is in collaboration with ICPO (ICMR) New Delhi.

## 5. A study on job satisfaction among ICMR scientists

**Progress**

The study has been taken up to assess the satisfaction level of ICMR scientist. This would involve the issues concerning the views of scientists on the following issues as recommende by the experts

- Working environment including infrastructure
- Library and training facilities
- Coordination with the seniors and the juniors
- Identification of the scientist with the Institute
- Future Prospects
- Administrative system
- Family environment including stress.

The Performa is in the process of development in consultation with the experts from Department of Psychology University of Delhi, Population Council and scientist from ICMR. Meetings have been arranged to discuss to finalize the study instrument and the operational modalities including the secrecy component. The issue of appointment of the SRF with relevant experience has been initiated. The details of the scientific staff have been received from most of the Institutes

## II. PUBLICATIONS

### Prof. Arvind Pandey, Director

1. Juneja A, Sehgal A, Mitra AB, Pandey A. A survey on risk factors associated with cervical cancer. *Indian Journal of Cancer*, 40(1), 15-22, 2003.

2. Roy Nandini, Shahina Begam, Bhutia Yonah & Pandey Arvind The trend of unmet need for family planning in Northeastern states of India, In *Dynamics of Population and Reproductive Health: Emerging Issue of Northern Region of India*, (Ed.) Dilip C. Nath, Capital Publication Company, Guwahati, pp 240-260, 2003.

3. Pandey Arvind, Roy Nandini, Sahu D, Acharaya R. Maternal Health Care Services, Observations from Chhattisgarh, Jharkhand and Uttaranchal. *Economic and Political Weeky*, XXXIX(7), 713-720, 2003

### Dr R.J. Yadav, Dy. Director

1. **Yadav R. J.** Arvind Pandey and K. Suresh**:** Coverage of IPPI Evaluation Survey in two districts of Bihar. *Indian Pediatrics* Vol 41, Sept 2004, 961-963.

2. **Yadav R.J** and Padam Singh, "Generalized Estimation under Successive Sampling using two stage design" *Journal of Progress of mathematics* BHU, Varanasi (In Press).

3. **Yadav R. J.** and Padam Singh **:** Immunisation status of children and mothers in North East States. *Journal of Health and Population – Perspective and Issues* (to appear in Dec 2004).

### Dr. Abha Rani Agarwal, Assistant Director

Valecha Neena, Singh Neeru, Yadav R. S., Vas Dev, Aggarwal Abha & Sarala K. Subbarao(2003): Field evaluation of OptiMAL48 rapid malaria diagnostic test in India. *Acta Parasitiologica*, 48(3), 229-232; ISSN 1230-2821.

### Dr. Damodar Sahu

Pandey Arvind, Nandini Roy, **D. Sahu** and Rajib Archarya (2004): Maternal health care services: Observations from Chhattisgarh, Jharkhand and Uttaranchal. Eonomic and Political weekly, 713-719 39(7).

Review article published in the Journal "Demography India" for the Book title" Fertility Measures from Birth Registration" by G. S. Somawat

### Dr. Atul Juneja, Research Officer

**Juneja A**, Murthy NS. Concept of and relevance of 'P value' in medical research. Obs. and Gynae Today, 2003; 8 (6); 334-335

**Juneja A,** Sehgal A, Mitra AB, Pandey A. A survey on risk factors associated with cervical cancer. Indian Journal of Cancer, 40(1), 15-22, 2003

## III Scientific Meetings / Invited Talks / Conferences / Seminars /Workshops attended

### Prof. Arvind Pandey, Director

### Meetings of National Committees

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|---|---|
| April 3-4, 2003 | Meeting on "HIV estimates in India-2002" regarding data management and analysis of HIV Sentinel Surveillance at Ministry of H&FW, NACO, New Delhi. |
| April 4 | Meeting of project Development of Demographic Database for Micro (District) level Planning in India: Exploration of Alternative Data Sources at IRMS (Asian Development Bank funded project). |
| April 5 | Meeting of the Project "CARE-Chayan" at IRMS. |
| April 9 | Visited Mumbai for IASP Executive Committee Meeting of IASP at IIPS, Mumbai |
| April 22 | Meeting on "HIV estimates in India-2002" at Ministry of H&FW, NACO, New Delhi. |
| | Meeting of Environmental Health Project(EHP) of USAID at Vasant Vihar, New Delhi. |
| April 23-26 | Training of Trainers Workshop for Baseline of Chayan Project of CARE India at India International Centre under the aegis of IRMS. |
| April 29 | Meeting of HIV/AID Prevention, Care & Support with Dr. Anrudh Jain. at Population Council, India Habitat Centre, New Delhi. |
| May 1 | 3rd Smt. Pushpa Sriramachari Oration at Instititute of Pathology (ICMR) by prof. N.K. Ganguly, DG, ICMR |
| May 7 | Meeting to discuss burden of disease programme of the Division of ECD & NCD at ICMR. |
| May 9-10 | Member, Selection Committee Meeting for ICMR Ad-hoc Research Project at Indian Leprosy Association (HQ), Red Cross Road, New Delhi. |
| May 15-18 | Visit to Varanasi-Lucknow for the project work of 'CHAYAN' |
| May 24 | Member, Selection Committee Meeting of National Institute of Pharmaceutical Education and Research (NIPER), S.A.S. Nagar (Mohali), Punjab for a faculty position in the area of Biostatistics at Convention Centre, Jamia Hamdard University, New Delhi. |
| May 27-28 | Workshop on competence building for writing up the proposals and seeking grants from national and international agencies at Srinagar(J&K). |
| June10-11 | Visted Patna for the project work of Causes of Death. |
| June 14 | The First meeting of Task Force at IIPS, Mumbai. |
| June 15-18 | Training Workshop on Methods for HIV/AIDS Estimates and Projections held in Bangkok, Thailand. |
| June 20-21 | Workshop of IIPS (?) |

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| | Meeting at ICMR to discuss about the licenses for use of Microsoft XP Professional software. |
| June 25 | Meeting of Bangalore, ISEC for the Project work of MMR at Bangalore. |
| June 26 | Meeting of Environmental Health Project(EHP) of USAID at Vasant Vihar, New Delhi. |
| June 27 | 19th Annual Day Function at Desert Medicine Research Centre, Jodhpur and delivered a "Message" for the "Annual Day' of the Center. |
| June 30 | Selection Committee Meeting for the post of Demographer/Programmer on consolidated salary in the project "Burden of Non-Communicable Diseases" at ICMR. |
| July 7 | Gauhati Regional Conference sponsored by UNFPA. On this occasion IASP organized a book release ceremony at Indian International Centre & Dr. Francois M. Farah, UNFPA Representative was the Chief Guest to release the Book. |
| July 9-11 | Invited to attend Data Analysis Workshop of CARE- OR Study on Neonatal at Lucknow.(Joint study of :John Hopkins School of Public Health and Chhatrapati Sahuji Maharaj Medical University, Lucknow.) |
| July 14 | Meeting with Dr. Venkatesh Srinivasan, Sr. Program Adviser, UNFPA |
| July 19 | Meeting to finalize HIV estimates in India for the year 2002 under the Chairmanship of DG, ICMR at ICMR. |
| July 29-30 | Meeting for disseminating the findings of the book entitled: Population Stabilization through District Action Plans (DAPs) of Centre for Policy Research at IIC, New Delhi. |
| | Brainstorming Meeting on the Proposed Population Policy Research and Advisory Group (PR-RAG) at the Centre for Policy Research at Committee Room (July 30, 2003) |
| July 31 | Lecture at NIHFW (11.30 AM) (?). |
| August 6-7 | Task Force Meeting at ICMR on Social and Behavioural Research. |
| August 7 | Second Technical Steering Committee for the NACO/FHI (Family Health International) Collaborative Study Project on Differentials in the HIV Epidemic Amongst IDUs in the North East States at ICMR. |
| August 14 | Meeting at IIPS, Mumbai. |
| August 18 | The findings of the Pre-test/Pilots conducted by ICMR MMR Study Presentation under the Chairmanship of Secretary (FW), Ministry of Health & Family Welfare. |
| August 20-26 | Visited Jamshedpur for the project work of Final Evaluation of Child Survival Project of Care India with the financial support from USAID. |
| September 1 | Meeting in the office of Dr.R.A. Mashelkar, DG, CSIR (Anusandhan Bhavan, Rafi Marg, New Delhi) of DGHS, Nirman Bhawan, New Delhi to assist in formulating the protocol of survey in connection with drug regulatory system in the country including the problems of spurious drugs. |

September 3 Doctoral Committee Meeting for Ms. Shahina Begum, Ph.D. Student in the Deptt. of Biostatistics, AIIMS.

September 11-12 Nominated to attend workshop of UNFPA Workshop at IIC, New Delhi.

September 12-13 Meeting of SARH (Society for Applied Research Humanities) above library at IIC.

September 13 Workshop on Integrating Support with Family Courts in India by NIPCCD & Campus Law Centre, Faculty of Law, Delhi Univ., Delhi. at Seminar Hall, Campus Law Centre, Delhi University, Delhi.

September 15 Visited Lucknow & Kanpur in connection with World Food Programmed(WFP) Project.

September 16 Meeting of Family Health International(FHI), New Delhi.

September 17-18 Workshop on "Emerging Demograpy & Health Scenaria in India : Exploration from NFHS-2 " at Centre For Economic and Social Studies(CESS), Hyderabad.

September 22-23 Member, Scientific Advisory Committee(SAC), National Institute for Research in Reproductive Health, Mumbai.

September 24 Release of book Towards adulthood : Exploring the sexual and reproductive health of adolescents in South Asia & Meeting on Non-consensual sexual experiences of young people in developing countries, organised by Population Council , WHO & Family Health International, New Delhi.

September 25.-27 Member, Scientific Advisory Committee(SAC), Regional Medical Research Centre(RMRC), Bhubaneshwar.

September 29 Core Group Meeting to discuss the study on tracking research flows for health research at ECD, ICMR.

September 29 Governing Body Meeting of Institute of Applied Statistics and Development Studies, IASDS, Lucknow at IRMS, New Delhi.

Sept. 29-30 Two days workshop to discuss the proceedings of 29th Annual Conference of ISMS at IRMS.

October 1 Dissemination meeting on "Addressing Reproductive Health Needs of Adolescents and Young Couples: Findings from Two Operations Research Studies" at Population Council, New Delhi.

October 6-8 ICMR-WHO Workshop on "Burden of Non-Communicable disease". Presented a talk on "Data available from NFHS with reference to NCDs" at Institute of Pathology, New Delhi.

October 8-9 Visited Kanpur for WFP Meeting.

October 13 Computer Committee meeting at ICMR.

October 16 Meeting at NACO

October 17 Second Advisory Group(SAG) Meeting to provide technical advice for operationalising the Baseline/Endline surveys at UNFPA

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| October 18 | Member, Scientific Advisory Committee Meeting, National Institute of Epidemiology, Chennai |
| October 20-21 | Visited Indore in connection with the work of Environmental Health Project (EHP) for child Health Survey. |
| October 26-28 | Visited Bihar & Jharkhand for HIV Sentinel Surveillance round 2003 by the Members of Task Force on Surveillance by National AIDS Control Society (NACO), New Delhi. |
| October 29-31 | A National Workshop on Acquired Immuno Deficiency (AIDS) at Manipur University, Imphal and Anadi Seva Prakalp, Ptana. |
| Nov. 1-3 | Meeting of CARE-CHAYAN for finalizing the combined draft report of the state. |
| Nov. 5 | Delivered lecture in the Training course for State Level Officials on Monitoring of RCH Programme on "Monitoring and Evaluation of RCH programmed using Large Scale Sample Surveys" at NIHFW , Munirka, New Delhi. |
| Nov. 7 | Organised SAC Meeting at IRMS. |
| Nov. 10 | Meeting at NACO |
| Nov. 11 | Visit to Dehradun for the work of the study "Impact of ICDS Food Fortification on Child Health " |
| Nov. 13 | National Release of India HIV/AIDS Chart Book' by Population Foundation of India and six fact sheets on existing high prevalence states. at Park Hotel, Connaught Place, New Delhi. |
| Nov.13-14 | IASP Regional Conference at Lucknow. |
| Nov.20 | Workshop organized by UNDP on the Estimation and Projection Model at the HIV/AIDS Stretegic Planning workshop at Rewari. |
| Nov. 23-25 | International Biometric Society Conference at BHU, Varanasi. |

Nov. 27-30 21st Annual Conference of ISMS at DMRC, Jodhpur .

Lecture on Research Methodology in the pre-conference course at DMRC Jodhpur on the occasion of 21st Annual Conference of ISMS.

Dec. 2 Doctoral Committee Meeting for Mr. Prem Chandra, Ph.D. Student in the Deptt. of Biostatistics, AIIMS, New Delhi.

Dec. 9, 2003 Meeting of Selection Committee for R.O. at Institute of Cytology & Preventive Oncology(ICPO), New Delhi.

Dec. 11-13 National Workshop on AIDS in North-eastern Region at Manipur University, Imphal Manipur Univ.

Dec.15 Post Round Regional Meeting on HIV Sentinel Surveillance at Mumbai AIDS Control Society , Mumbai.

Dec.17 Post Round Regional Meeting on HIV Sentinel Surveillance at Punjab University, Chandigarh.

Dec. 19 Annual General Meeting of ISPS at DMC Hall Osmania University, Hyderabad

Dec 23 5th Meeting of Investigational New Drug Trial Monitoring Committee at Dabur Research foundation, Sahibabad.

Dec. 24 Second Meeting of task force on family welfare linked health insurance survey with Jt. Secy. (F.W.), Nirman Bhavan, New Delhi.

Dec. 26 NIHFW Meeting

Dec. 29 Divisional Chiefs Meeting with the help of their Scientific Staff will make a presentation on every Monday (First Meeting is Divn. of ECD on 29th) at ICMR.

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| Dec. 30 | Meeting of investigators on "Estimation of Spread of HIV/AIDS" at NIHFW, Munirka, New Delhi.(11.00 A.M.) |
| January 2 | Seminar on the Future of India at IIC (10.00 A.M.) (Tim Dyson) |
| January 2 | Meeting of Job Satisfaction at IRMS. |
| January 5 | Viva Voce Exam at IIPS |
| Jan. 9 | Concluding Session of training course at NIHFW |
| Jan 12 | Divisional Chiefs Meeting with the help of their Scientific Staff will make a presentation on every Monday (Third Meeting of Divn. of Reproductive Health) at ICMR. |
| Jan. 15 | Inauguration Ceremony and Exhibition of the Volunteer Promotion Team of the United Nations Volunteers of Schizophrenia support group. |
| Jan. 16 | Meeting at UNFPA regarding the progress made on initiation of the Endline/Baseline Survey. |
| Jan 19 | Divisional Chiefs Meeting with the help of their Scientific Staff will make a presentation on every Monday (Fourth Meeting of Divn. of Non-Communicable Diseases) at ICMR. |
| Jan. 19 | Presentation on Integration of Statistiical Findings : Presentation of Results in the Refresher Course on Project Formulation for Social Interventions : Application of Social Science Research Methods and Statistical Techniques for University Teachers at NIPCCD, New Delhi. |
| Jan.26-30 | Workshop on "New Strategies for HIV/AIDS Surveillance in Resource Constrained Settings" held in Addis Abada, Ethiopia. |
| Jan. 27-28 | Reproductive & Child Health Project (Phase I, Round 2) Results /Reproductive & Child Health Services(RHS) National Dissemination Seminar of District Level Household Survey at Standing Conference of Public Enterprise(SCOPE), SCOPE Complex, Core 8, Ist Floor, 7 Lodi road, New Delhi-110003. |
| Feb. 6-7, 2004 | Director's Meeting at CJIL, Agra |
| Feb. 10 | Task Force Meeting on Causes of Death by Verbal Autopsy Project at ICMR |
| Feb. 9-11 | IASP Annual Conference at Annamalai. |
| Feb.17 | Meeting with UNFPA Country Director in the Evening |
| Feb. 18-19 | Pre-SAC, DMARC, Jodhpur |
| Feb. 20 | Member, Scientific Advisory Committee of DMRC,Jodhpur |
| Feb. 20-21 | NFHS Workshop at IIPS Mumbai |
| Feb. 25 | Technical Committee Meeting of MMR Pilot Study at Ministry of H& FW Nirman Bhavan, New Delhi. |
| Feb.25-26 | Meeting of the project "Innovative Study of AIDS Awareness among truckers in India" at |

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| | IRMS. |
| February | Examiner of Viva-voce examination at Deptt. of P.S.M., Banaras Hindu University, Varanasi for Mr. Pankaj Kumar Mishra |
| March 4 | Selection Committee Meeting for the recruitment of Data Entry Assistant in an ICMR Project "Review on Indian Medicinal Plants" at ICMR. |
| March 5 | TC Network Meeting at TNS Mode, New Delhi. |
| March 5 | Technical Advisory Committee meeting to discuss the equipment requirement of the Institute at IRMS. |
| March 9 | Member, Screening Committee for the post SRO(Stat.) of RMRCT, Jablapur at ICMR, New Delhi. |
| March 10 | NACO-STI Survey Meeting at IRMS to discuss the equipment requirement of the Institute. |
| March 11 | Meeting of small working group of "Task Force group on Surveillance" at NIHFW, Munirka, New Delhi. |
| March 12 | Third Technical Advisory Group Meeting on research "Impact assessment of fortification of ICDS supplementary food in the state supported projects of World Food Programme at India Habitate Centre, New Delhi. |
| March 15 | Invited to attend the presentation on the survey on "AYUSH Beneficiaries Covered Under CGHS and Selected Teaching Hospitals Attached to AYUSH Colleges" at Red Cross Building, New Delhi. |
| March 18 | Invited to deliver a Lecture on Medical Statistics at MS University, Vadodara |
| March 22-23 | Invited to attend the NFHS Workshop and presented a paper at IIPS, Mumbai. |
| March 26, 2004 | Attended the Second Doctoral Committee Meeting for Ms. Shahina Begum in the Deptt. of Biostatistics, AIIMS, New Delhi |
| March 29 | MMR Meeting |

## Membership:

### Current Member of National Research/Working Committees

Task Force on Sentinel Surveillance on HIV/AIDS, NACO, Ministry of Health & Family Welfare, Govt. of India.

Working Group to Estimate the Excess Death on Account of HIV/AIDS, NACO, Ministry of Health & Family Welfare, Govt. of India.

Working Group on the Community Based Study on STI Prevalence in India, NACO, Ministry of Health & Family Welfare, Govt. of India.

Technical Group on Population Projection, National Commission on Population, Govt. of India.

Task Force on Social & Behavioural Research in Reproductive Health, Indian Council of Medical Research, New Delhi.

Task Force in Statistics, Indian Council of Medical Research, New Delhi.

Project Advisory Committee of National Household Survey on Patterns and Trends in Drug Abuse in India, UNDCP under the Ministry of Social Justice and Empowerment
Technical Advisory Committee of End Line Survey of Integrated Nutrition Health Project, CARE-India.

Technical Advisory Committee of Base Line Survey of *Chayan* component of *Rachana* of Integrated Nutrition Health Project, CARE-India.

Technical Advisory Committee of the WFP Evaluation of the Food Fortification Impact on Child Health through ICDS in India.

Scientific Advisory Committee of the National Institute of Epidemiology, Chennai, Tamil Nadu.

Scientific Advisory Committee of the National Institute for Research in Reproductive Health, Mumbai

Scientific Advisory Committee of the Regional Medical Research Centre, Bhubaneshwar, Orissa.

Scientific Advisory Committee of the Regional Medical Research Centre for Tribals, Jabalpur, Madhya Pradesh.

Scientific Advisory Committee of Desert Medical Research Centre, Jodhapur, Rajasthan.

Working Group on Strengthening Monitoring and Evaluation System for Social Sector Development Schemes during X Five-Year Plan on Programme Evaluation, Planning Commission, Govt. of India

Working Group on Implementation of Population Policy and Rapid Population Stabilization, Ministry of Health & Family Welfare, Govt. of India.

Working Group for the finalization of X Five-Year Plan document of the Dept. of Family Welfare, Ministry of Health & Family Welfare, Govt. of India.

**Participation in International Meetings/Conferences/Workshops**

2004 Conference on New Strategies for HIV/AIDS Surveillance in Resource Constrained Countries at Addis Ababa, 26-30 January (Sponsored by WHO).

2003 Workshop on Methods for HIV/AIDS Estimates and Projections, at Bangkok, June 16-18 (Sponsored by UNAIDS).

**Membership of National and International Professional Bodies**:

1. International Biometric Society (IBS).
2. International Union for the Scientific Study of Population (IUSSP).
3. International Epidemiological Association (IEA).
4. Population Association of America(PAA).
5. Canadian Society for International Health(CSIH).
6. Indian Association for the Study of Population(IASP), Vice-President (2000-2004)
7. Indian Society for Medical Statistics ((ISMS) (1994-98),
8. Indian Science Congress Association (ISCA).

9. Indian Society of Probability and Statistics(ISPS).

**External Examiner/Consultancy/Ph.D. Students:**

External Exaiminer for

1. Review the Research project entitled "Developing a Database for Designing Prevention and Control of Human Leptospirosis in North Kerala' and send to Dr. Sushma Gupta, DDG(ECD), ICMR, New Delhi (Reviewed by Dr. Atul Juneja in May 6, 2003.

2. Review the proposal entitled "Surveillance of Risk Factors for Communicable Disease" and send to Dr. Bela Shah, Sr. DDG, ICMR, New Delhi in May 21, 2003.

3. Review the proposal entiled "Establishment of National surveillance system for rotavirus disease in India" send by Dr. Rashmi Arora, DDG(SG), ICMR, New Delhi in July 14, 2003.

4. Constultant for the project proposal entitled "Nutrition and Lower Reproductive Tract Infections: An Exploratory Study in Urban Indian Women of Reproductive Age" send by Dr. N.C. Saxena, DDG(SG) in July 14, 2003.

5. Evaluate the Paper entitled **"An Indirect Technique for the Estimation of Infant and Child Mortality Rates"** for publication in the journal – "Health and Population: Perspectives and Issues." send by **Dr. T. Mathiyazhagan**, Editor, Health & Population Perspective and Issues, National Institute of Health and Family Welfare, Munirka, New Delhi in July 28, 2003.

6. Send comments on the paper of **Girdhar G. Agarwal and S.D. Walter** entitled **"Choice of outcome measure and baseline risk as an explanation of heterogeneity in Meta-analysis" to** Dr. M.N. Das, I-1703, C.R. Park, New Delhi for publication in his journal.(Others).

7. Send comments of the paper entitled " Duration of Breastfeeding Among Women in Bangladeash" send by Dr. N. Medappa, Editor, Indian Journal of Medical Researach(IJMR), ICMR in August 18, 2003.

8. Send comments of the paper entitled "Mathematical or statistical models for the description of the disease" to be undertaken by Ms. Fakhrolsadat Bourang, an Iranian national" to Director General, ICMR in February 5, 2004 in response to the letter of Ministry of H&FW, New Delhi.

9. Send comments of the study establishment of National surveillance system for rotavirus disease in India.

**Dr. R.J. Yadav**

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| January 27-28, 2004 | Invited to attend National Dissemination Seminar on Reproductive & Child Health ( Phase I, Round II) Results during at Delhi being organized by IIPS, Mumbai. |
| April 24, 2003 | Invited to attend Tenth meeting of the Management and System Division Council ( MSDS) on at Bureau of Indian Standard, Manak Bhawan, New Delhi- 110002. |
| May 30, 2003 | Invited to attend Technical Advisory Group meeting at India Habitat World, New Delhi in which the presentation of the report of Uttar Pradesh was done. |
| April 5,2003 & | Attended the meetings to finalize the study Instruments of CARE project on May 10 & 19, 2003 at IRMS, New Delhi. |

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| April 30, & May 26, 03 | Attended the meetings to finalize the draft reports of Uttar-Pradesh of WFP project on at IRMS, New Delhi. |
| September 1, 2003 | Attended the meetings to finalize the draft Report of CARE project on at IRMS, New Delhi. |
| April 24, 2003<br>May 10 & 19, 2003 | Attended the Monitoring Committee of the IRMS renovation committee , for finalization the terms of references for renovation between UPRNN and IRMS. |
| March 12, 2004 | Invited to attend Technical Advisory Group meeting at India Habitat, New Delhi in which the presentation of the report of Bench Mark assessment was done. |
| March 15, 2004 | Attended the meetings to finalize the tabulation plan and Preliminary findings of CGHS-ISMH on at Department of AYUSH, MOHFW, New Delhi. Secretary, AYUSH attended the meeting. |

**Dr R. K. Gupta**

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| Nov. 28-30, 2003 | XXI Conference of Indian Society for Medical Statistics held at DMRC, ICMR.Jodhpur. |
| Feb. 9-11, 2004 | Annual Conference of IASP at Annamalai, Chennai. |
| Feb. 4-6, 2004 | Attended Three Days National Workshop on MIS under Health & Family Welfare Programmes at National Institute of Health & Family Welfare |

**Mr. Anil Kumar**

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| **June 20-21,2003** | Attended the Data User Workshop pertaining to NFHS-2 data organized by IIPS at IRMS, Delhi |
| **Nov 28-30,2003** | Attended and presented paper"Causes of Death Ascertainment, Development of Algorithm and Its Illustrative Application" in 21st Annual Conference of Indian Society of Medical Statistics at DMRC, Jodhpur. |
| **November 7, 2003** | Attended SAC meeting in IRMS,Delhi. |
| **Feb 10,2004** | Attended Task Force meeting of the study "Causes of Death by Verbal autopsy" in ICMR Headquarter, New Delhi |

**Dr. Abha Rani Agarwal**

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| June 30,2003 | Attended a meeting for the progress on Hindi at IRMS. |
| July 2, 2003 | Attended a Task Force Meeting at ICMR and **presented two** proposals. |
| August 8 , 2003 | Attended a seminar on SPSS 11.5 organized by SPSS South Asia at Hotel La Meridiem, Connaught Place, New Delhi. |
| August 18,2003 | Attended a Core Group Meeting in MOHFW for the presentation of Maternal Mortality Ratios Study. |
| Sept. 1-5, 2003 | Attended as a Resource persons in training programme on |

Epidemiological Methods for the Scientist from Nepal.

Sept 18- 19th, 2003 — Invited as a **Resource person** to delver **two** lectures on **"Statistical considerations in clinical trials " and "Compilation and analysis of Clinical trial data** " in the Training Workshop on Research Methodology at Central Council for Research in Ayurveda and Siddha , Institutional Area, Janakpuri, New Delhi

October 11, 2003 — Attended Etical Committee Meeting at .Central Council for Research in Ayurveda and Siddha , Institutional Area, Janakpuri, New Delhi.

November 1, 2003 — Attended Ethical Committee Meeting at IRMS, New Delhi.

November 7, 2003 — Attended and presented the research studies on Estimates of MMR in India and its States and a case control study on MMR in SAC at IRMS.

November 29- 1st Dec,2003 Attended XXI Annual Conference of ISMS at Jodhpur and presented a paper on "Estimates of Maternal Mortality Ratios in India and its States- A Pilot Study".

Dec 8-10, 2003 — Attended a Symposium on Extended Contraceptive Practice at IRR, Bombay.

January 15, 2004 — Invited as a **Resource person** to deliver **two** lectures on **Correlation and Regression( Test and Technique) and Regression with Dummy Variables** in "Refresher's Course on Project Formation for Social Interventions at National Institute of Public cooperation and Child Development, Siri Institutional Area Hauz khas, New Delhi.

Febuary 25th , 2004 — Attended a Core Committee meeting in MOHFW for finalization of sample size and methodology for National level study on MMR

March 26,2004 — Attended purchase Committee meeting for IRMS

**Dr. Tulsi Adhikari**

June 20-21 2003 — Attended workshop on NFHS data management at IRMS

August 8 , 2003 : — Attended a seminar on SPSS 11.5 organized by SPSS South Asia at Hotel La Meridiem, Connaught Place, New Delhi.

November 1, 2003 : — Attended Ethical Committee Meeting at IRMS, New Delhi.

November 7, 2003 — Attended and presented the proposed Health Information System at IRMS in SAC at IRMS.

Nov. 28-30 2003 — Attended 21st Annual Conference of Indian Society for Medical Statistics held at Desert Medicine research Centre Jodhpur, Presented paper entitled "Identification of Poor : Quality of Life Approach" and was awarded with "**Prof R.N.Shrivastava Award"**.

December 4,2003 — Attended the Advisory Committee meeting on the modernization of the facilities and infrastructure of Council's Libraries at ICMR head Qrts.

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| Feb. 4-6, 2004 | Attended Three Days National Workshop on MIS under Health & Family Welfare Programmes at National Institute of Health & Family Welfare |
| March 15, 2004 | Attended the meetings to finalize the tabulation plan and Preliminary findings of CGHS-ISMH on at Department of AYUSH, MOHFW, New Delhi. Secretary, AYUSH attended the meeting. |

## Dr. D.Sahu

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| April 4, 2003 | Meeting of project Development of Demographic Database for Micro (District) level planning in India: Exploration of Alternative Data Sources at IRMS (Asian Development Bank Funded project). |
| June 14-17, 2003 | Visited Patna for co-ordinate and monitoring fieldwork for the study Causes of Death by Verbal Autopsy. |
| June 20-21, 2003 | Attended data user workshop on NFHS-2 Data management organized by IIPS at IRMS |
| September 8-12, 2003 | Invited to participate in the workshop on PROFILES organized be Linkages India (USAID) at the Essex Farm, New Delhi. |
| November 1, 2003 | Attended Ethical Committee Meeting at IRMS, New Delhi. |
| November 7, 2003 | Attended and presented the research studies on Development of Demographic Database for Micro (District) level planning in India: Exploration of Alternative Data Sources in SAC meeting at IRMS. |
| January 2, 2004 | Attended the meeting on the Job Satisfaction Level of ICMR Scientists |
| February 17, 2004 | Invited to participate farewell party to Honor of Dr. Francois Farah, UNFPA Representative for his academic and financial support at India Internal Centre Annexes , New Delhi. |
| July 26, 2003 | Act as a selection committee member for the post SRF and computer Assistant for one of the project at IRMS |
| May 1-3 | Participated and presented a paper titled "Community Effects on Infant Mortality in Rural India: A Multilevel Approach to Prioritize the Program Inputs' in the 2003 Annual Meeting of Population Association of America, at Hilton Minneapolis and Towers, Minneapolis, Minnesota. |
| December 3-5, 2003 | Attended the 2003 annual MALI (Medical Library Association of India) National Convention at Pune, organized by National Institute of Virology, Pune. |
| February 9 –11, 2004 | Participated and presented a paper titled "Does environment and social set-up affect maternal mortality in India? An exploratory study based on NFHS" at the XXVI Annual Conference of the IASP, held at Annamalai University Tamil Nadu. |

**Dr. Atul Juneja**

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| May 12, 2003 | Attended National technology day oration on Nutritional genomics: Chasing Dreams by Prof Ashish Dutta, Director National Centre for Plant genomic Research at ICMR Head Qrts. |
| June 20-21 2003 | Attended workshop on NFHS data management at IRMS |
| July 26 2003 | Attended Selection Committee meting as a member for the post of the SRF and computer Assistant for one of the Projects at IRMS |
| August 8 2003 | Attended presentation of various SPSS modules at Hotel Le Meridian. |
| September 8 2003 | Attended Building Committee of ICPO (ICMR) ICPO Complex at NOIDA under the chairman of Dr. VC Vora. |
| Oct. 26-30 2003 | Attended second annual conference of frontiers in cancer Prevention Research of American Association for Cancer Research held at JW Marriott Desert Ridge Resort Phoenix, Arizona United States of America. |
| Nov. 28-30 2003 | Attended 21st Annual Conference of Indian Society for Medical Statistics held at Desert Medicine research Centre Jodhpur and presented a paper on Control of Cervical cancer by Life Style Modification (Atul Juneja, A. Sehgal,Arvind Pandey). |
| December 4,2003 | Attended the Advisory Committee meeting on the modernization of the facilities and infrastructure of Council's Libraries at ICMR head Qrts. |
| Jan 2, 2004. | Attended the meeting on the Job Satisfaction Level of ICMR Scientists. |
| January 21,2004 | Coordinated the oraganisation of Lecture by Dr. YK Choubey from Concordia university Montreal Canada on randomized Response trials. |
| January 29-31, 2004 | Attended 23rd Annual Conference of Indian Association For Cancer Research held at Advanced Centre for Treatment research and Education, Tata Memorial Centre Kharghar Navi Mumbai and presented a paper on Case Control Analysis of Various Modifiable Risk factors associated with cervical cancer (Atul Juneja, A.Sehgal, Arvind Pandey) |

## IV. TRAINING

**Prof. Arvind Pandey**

**Faculty Member for the following training Programmes in Institute for Research in Medical Statistics**

1. Training in SPSS and other statistical packages in July at IRMS.
2. Training Programme in Research Methodology ( 1-5 Sept., 2003 at IRMS)
3. Training in Health Statistics specifically for data management and analysis to the WHO Fellow (U Tun Aung Hla) of Myanmar during 8-26 September, 2003.
4. Organised Secretarial Practice on the Job Training Programme for YWCA Student Ms. Maria George in January.

5. Organised training Programme for DPS, MPS/M. Phil students at IRMS on February 21, 2004.

6. Organised training programme at the level of LLDC/UDC/Assistant/PA./Stenographer of the ICMR Hqrs. Officer in Computer Application through NIC in March 8-12, 2004.

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**Dr. R.K. Gupta**

Participated as a faculty in a training programme for the M.Sc. (Final) Statistics

Of Kurukshetra University from 23 Dec. 2003-2nd Jan.2004

**Mr. Anil Kumar**

1. Delivered 20 lectures on "Electronic Data Processing" to Medical Record Officers trainee of Safdurjung hospital New Delhi.
2. Delivered 20 lectures on "Electronic Data Processing" to Medical Record Technician's trainee of Safdurjung hospital New Delhi.

**Dr. Abha Rani Agarwal**

1. Organised a summer training Programme for Students of Post Graduate Diploma in Bioinfomatics from Ranchi, Sept. 16-31st October .

2. Attended as a Resource Person and deliver lecture on **Logistic Regression Analysis** in Training Programme at IRMS, July 21-25 ,2003

3. Attended as a Resource person and deliver lecture on Odds Ratio & Case Study for the students of M.Sc( Statistics) from Kurushetra University, Dec23-1st Jan, 2003

**Dr. Tulsi Adhikari**

**Organised Following Training Programmes and Delivered Lectures**

1. Training in SPSS and other statistical packages in July at IRMS.

2. Training Programme in Research Methodology ( 1-5 Sept., 2003 at IRMS)

3. Training in Health Statistics specifically for data management and analysis to the WHO Fellow (U Tun Aung Hla) of Myanmar during 8-26 September, 2003.
4. Training to the students of M.Sc. (Statistics), Kurukshetra University on Applied Statistics.
5. Training to the students of Diploma in Bio-Informatics, Ranchi.

## Dr. Damodar Sahu

Delivered lectures for the following training programme given below organized by IRMS during the session 2003-2004.

1. Hands on computer Training in data analysis using SPSS for scientists of Delhi based research Institutions and Medical college/Hospital during 21-25 July 2003

2. The training program on research methodology held for the group of scientists from Nepal Health Research Council during September 1-5, 2003

3. The training in Health Statistics specifically for data management and analysis to the WHO fellow (Mr. U Tun Aung Hla) of Myanmar during September 1-26, 2003.

4. The training program for the final year M.Sc. student of Kurukeshetra University held at the Institute from 23 December 2003 to 1 January 2004.

5. Organized training workshop for the field staff (the Medical doctors and Social Scientists) for second round fieldwork for the study Cause of Death by Verbal Autopsy at Patna February 21-24, 2004

**Dr Atul Juneja**

1. Acted as resource person for the workshop on SPSS held at IRMS from 21-25 July 2003

2. Acted as resource person for the training program held for the group of scientists from Nepal from 1-5 September 2003 and delivered lectures on Epidemiological methods.

3. Delivered Lectures during the training program for the final year M.Sc. students of Kurukshetra University held at the Institute from 23 Dec 2003 to 1 January 2004

## V. STATISTICAL CONSULTANCY

**Prof. Arvind Pandey**

* Provided consultancy to various users, researchers and scientists. These activities aimed to develop a health network and to achieve the objectives set as mandate for the Institute

**Dr. R. K. Gupta**

Consultancy was provided to medical researchers in planning and analysis of their studies. Worked as a member of committees and did other work as and when assigned.

**Dr Abha Rani Aggarwal**

1. Provided statistical data analysis consultancy to Dr. Ajai Garg , Army Hospital for his thesis on A Study of clinical profile of chronic hepatitis B and C in patients co infected with human immuno deficiency virus.

2. Provided consultancy to Dr. Gaurav Kakkar, Consultant and Dr. Dwivedi, Manager for the designing of "a study on refractive Error Study in School going Children "

3. Provided statistical consultancy and data analysis to Dr. Shilpi Jindal, safdar Jung Hospital for her thesis on Management programme of Beningn ponoxysmal positional vertigo.

4. Provided consultancy to Dr. Suman Nisha, a DNB student of Venu Eye Institute & Research Centre for her thesisi on "Corneal Endothelial Evaluation."

5. Provided consultancy and data analysis to Dr. C.P.Thakur, for his research paper on " A comparison of Sodium Antimony Gluconate and Amphotericin B Dehydroxycholate as first line drugs in the treatment of Kala-Azar.

6. Provided comments on Programmes and policies to arouse awareness on essentials & interventions for safe motherhood and safe delivery.

7. Provided consultancy and data analysis to Dr. Irfan Robbani, Asstt. Prof., Sri Nagar for the research publication on "Clinico- Radiological evaluation of outcome in patients with spontaneous intracerebral hemorrhage."

8. Provided comments on study of the epidemiology of Tuberculosis in India,using Molecular methods by Dr.(Mrs.) UrvashiB.singh, AIIMs, New Delhi

9. Provided comments on the research project entitled" Analysis of Medical Data with selection bias and missing information " of an Etniopian national.

10. Provided comments on research project entitled" Proposal for establishment of Hospital based National surveillance systems for rotavirus Disease and Strains in India " of Dr. M.K.Bhan, AIIMS"

**Dr. Tulsi Adhikari**

Providing statistical consultancy to the researchers (MD/PhD students & senior scientists) from Hospitals and Medical Colleges for the study design, data analysis and interpretation of their results.

**Dr. Damodar Sahu**

I have provided technical consultancies to research organization such as USAID organizations Environmental Health Project II - India to analyze NFHS-2 data by standard of living Index, PROFILE project of AED/LINKAGES India, and SDM project of CARE India.

Academic (Guidance to research scholar)

Ms. Meherzad Taghizade, Master of Nushing Rajkumari Amrit kaur College of Nurshing for the study on to assess the knowledge and attitude of adolscent girls regarding prevention of HIV/AIDS in selected colleges of University of Delhi'.

**Dr. Atul Juneja**

**Following persons consulted for the statistical evaluation of their projects**

1. Prof NN Mathur Prof of ENT Lady hardinge Medical College for the study on the comparison of two operative procedure.

2. Prof Sudhir Kapoor Prof at Dept. of Orthopedics at Maulana Azad Medical College consulted for Drug trial analysis.

3. Dr Geeta Vidyadharan DNB (Path) at IOP (ICMR) consulted for her thesis Antiapoptotic genes in Neoplastic and Preneoplastic Conditions of Prostate.

4. Dr. Rajinder from Dept of ENT Lady Hardinge Medical College for the evaluation of his thesis work.

5. Dr Ashima Anand of VB Patel Chest Institute consulted for her project.

6. Dr Narinder Pal Singla DNB tutor at Venu Eye Institute and Research Centre new Delhi consulted for his dissertation on Contrast Sensitivity in different morphological types of early cataract.

7. Dr. Mona Banibha from Deptt.of ENT Lady Hardinge Medical College consulted for her thesis on "Comparison of Functional Endoscopic sinus surgery with and without partial Middle turbinate resection"

## VI. VISITORS

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| June 23 | Dr. R.C. Kalra, Director, CBHI , Ministry of H & FW visited IRMS to develop partnership in the development and Production Software for Health Research. |
| June 24 | Dr. Karuna Onta, resident Advisor, The Linkages India Proj visited this institute to develop partnership in the Development of Dissemination software for the promotion of breast feeding in Child Development. |

## VII. STAFF LIST

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| Director | *Prof. Arvind Pandey*, M.Sc., Ph.D., FSMS |
| Deputy Director | *Dr. S.C. Mehta*, M.Sc., Ph.D<br>*Dr. R.J. Yadav*, M.Sc., Ph.D.<br>*Dr.. S.K. Benara*, M.D.<br>*Dr. R.K. Gupta*, M.Sc., Ph.D. |
| Assistant Directors | *Mr. Anil Kumar*, M.Sc.<br>*Dr. (Ms.) M. Thomas*, M.Sc., Ph.D.<br>*Dr. (Ms.) Abha Rani Aggarwal*, M.Sc., Ph.D. |
| Research Officers | *Dr. Tulsi Adhikari*, M.Sc. Ph.D.<br>*Dr. Damodar Sahu*, M.Sc., DCA, CPS, Ph.D.<br>*Dr. Atul Juneja, M.Sc., Ph.D.* |
| Data Processing Officer | *Mr. Ashok Kumar*, M.Sc. |
| Technical Officer | *Mr. H.C. Joshi*<br>*Mr. S.K. Mathur*<br>*Mr. Tejpal Singh*<br>*Mr. K.L. Badolia* |
| Senior Investigators | *Mr. Vinay Kumar*<br>*Mr. Suman Kumar Bara*<br>*Ms. Usha Rani Gupta*<br>*Mr. Rajendra Singh Awana* |
| Research Assistants | *Mr. Bhagirath Lal*<br>*Ms. Sunita*<br>*Mr. Charan Singh* |
| Field Investigators | *Mr. Gurmeet Singh*<br>*Mr. Shiv Kumar*<br>*Mr. Parmatma Mahato* |
| Data Processing Assistant | *Mr. Ajay Kumar Sharma*<br>*Ms. Parminder Paul* |
| Data Entry Operator (Grade-D) | *Ms. Sita Sinha*<br>*Ms. Sudarshan Khanna*<br>*Ms. Kamal Anand*<br>*Mr. Rajender Singh Sharma*<br>*Ms. Kailash Bajaj* |
| Library Asst &-Information Officer | *Mr. Naresh Aggarwal* |
| Data Entry Operator (Grade-B) | *Mr. Prem Chand*<br>*Ms. Indira Rani*<br>*Ms. Geeta Sharma*<br>*Ms. Promila Toppo*<br>*Ms. Madhu Mehra* |

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| | *Mr. Kapil Gautam* |
| Field Assistant | *Mr. R.K. Yadav* |

**ADMINISTRATIVE STAFF**

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|---|---|
| Administrative Officer | *Mr. B.S. Sharma* |
| Private Secretary | *Ms. Poonam* |
| Personal Assistant | *Ms. Usha Gulati* |
| Section Officer | *Mr. R.S. Chadha*<br>*Mr. L.R. Chuttani* |
| Assistants | *Mr. Bal Raj Sharma*<br>*Mr. Raj Kala Ahlawat*<br>*Ms. Shalini Sharma*<br>*Ms. Amarjeet Kaur Bhasin*<br>*Mr. Mukesh Kumar Kaushik* |
| Upper Division Clerks | *Ms. Kusum Luthra*<br>*Mr. B.M. Malhotra*<br>*Mr. B.P. Singh* |
| Jr. Stenographer | *Ms. Satvinder Kaur* |
| Lower Division Clerk | *Mr. Ramesh Kumar Gupta*<br>*Mr. Shankar Lal* |

**SUPPORTING STAFF**

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|---|---|
| Senior Driver | *Mr. Shish Pal* |
| Driver | *Mr. Desh Bandhu*<br>*Mr. Des Raj (NNMB Project)* |
| Daftary | *Mr. D.D. Manjhi* |
| Peon | *Mr. Ram Pal*<br>*Mr. Dharmveer Singh*<br>*Mr. Gopi Chand*<br>*Mr. Gyan Chand*<br>*Mr. Ramesh Chand*<br>*Mr. Jagili Sabar* |
| Farash | *Mr. Ram Nath*<br>*Mr. Vijay Chand* |
| Safai karamchari | *Mr. Vimal Kumar*<br>*Mrs. Raj Mala* |