Annual Report

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ICMR-National Institute of Medical Statistics

Ansari Nagar, New Delhi—110029

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A. Completed Activities

1. Levels, Differential and Factors Associated with Falls among Older Adults in a Tertiary Care Hospital of Delhi: A Cross- Sectional Study

Background: Worldwide, the number of people over 60 years is growing faster than any other age group and expected to grow from 688 million in 2006 to almost 2 billion by 2050. Aging is generally associated with progressive decline in physical and psychological health with increased risk of disability and dependency as well as an increase in the number of co -morbidities. In India, the prevalence of falls among older adults 60 years and older was reported to vary between 14% to 53%.

Objective: The present study aimed to estimate the magnitude of the fall among the older adult (≥60 years), its differential and factors associated with falls.

Methods: Using primary data collected from Geriatric OPD in Medicine Department of AIIMS. The data on 850 subjects was collected including 10% refusals. From each OPD , patents were selected by systematic random sampling Every fifth patient attending the OPD was interviewed for data collection after taking the informed consent. To meet the objective, the univariate and multivariate logistic analysis were performed.

Findings: The level of falls in Indian older adults was found to be 22% with SE of 1.5% and 95% CI as (19%, 25%). Out of 168 subjects with fall, 117(69.6%) had fall once, 43(25.6%) had fallen twice and 8(4.8%) had fallen for three times and above in past in one year.

Conclusion: The findings of this hospital based study indicate falls are a public health problem in Indian older adults. The identified risk factors from this study are age, BMI and frailty. Findings of the study suggest that more studies need to be conducted at community level with proper methodology for prevalence of falls. The prevention strategies for falls at population level have yet to be properly studied.

2. A Comparative Study on Factors Associated with Under-five Mortality Among Scheduled Tribes and Other Social Groups in India

Background: Globally, there has been considerable progress in reducing under-five mortality (U5MR). The U5MR declined by 53% and the number of under-5 deaths dropped from 12·7 million in 1990 to 5·9 million in 2015. The SDG target for child mortality represents calls to end preventable deaths of newborns and children under five years of age by 2030, with all countries aiming to reduce neonatal mortality to at least as low as 12 deaths per 1,000 live births and under-five mortality to at least as low as 25 deaths per 1,000 live births. India's commitment towards reducing infant and child mortality is well reflected in the significant progress made in these goals. The under-five mortality declined from 125 per 1000 live birth in 1990 to 49 per 1000 live births in 2013 nonetheless India has missed the target of 42 deaths per 1000 live births. The decline has been faster in the recent past indicating the dedicated efforts of both governmental and non-governmental organisations. Most child deaths are caused by diseases that are readily preventable or treatable with proven, cost-effective interventions.

In India, women and children belonging to certain socio-economic groups such as scheduled castes and scheduled tribes are placed at a higher disadvantage compared to the other groups with respect to overall morbidity and mortality (Po and Subramanian, 2011). Studies have shown that a child born to a Scheduled Tribe family has 19% higher risk of dying in the neonatal period and 45% risk of dying in the post-neonatal period compared with other social classes. Though similar trends in child mortality have been observed for infant and neonates in both tribal and non-tribal populations, there is a disproportionate increase in death among children aged 1-4 years belonging to the Scheduled Tribes compared with the non-Scheduled Tribes.

According to census (2011), tribes constitute 104.3 million populations, 8.6% (11.3% rural and 2.8% urban) of the total population in the country, 90 districts (more than 50% ST population) and 62 districts (between 25% to 50% ST population) of 21 States & UTs. Though there has been progress in India, this has not been uniform across different socio-economic groups including tribes. Therefore, there is a need to closely examine the variations in the under-five child mortality among scheduled tribes across different regions/districts in India.

Objective: The main objective to examine the factors associated with under-five mortality among scheduled tribes and other social groups in India.

Data & Method:

Data: Two main data sources are used for this study i.e, Census and National Family Health Survey. Census data is used to provide information related to the distribution of scheduled tribes in different states of India and also some background characteristics by the different social groups. NFHS provides state and national level information on fertility, family planning, infant and child morbidity and mortality, maternal and reproductive health, nutritional status of women and children, and the quality of health services. In NFHS, all eligible aged 15-49 years women were asked to provide information on complete birth history, which included sex, month and year of birth, and survival status for each live birth. The information on age at death was recorded in days for children who had died in the first month of life; in months for children who had died after the first month but before completion of their second birthday, and in years for children who had died at later ages. For children who had died after their second birthday, age at death in months were computed. Detailed information on antenatal, delivery and postnatal care, height and weight and haemoglobin level for the births which occurred five years in 2005-06 preceding the survey to eligible women were collected. The present study was restricted to all live births that occurred five years preceding survey among all eligible women. The children data file was created having data for each child, survival status (alive or dead), age at death, age at the time of survey, selected characteristics of the child, child's mother, household, and health care received by mother during pregnancy and at delivery.

Wealth Index: NFHS did not collect information on income. Household income is proxied Standard of Living Index on the basis of ownership of household assets. Scores are assigned to type of house, type of toilet facility, source of lighting, main fuel for cooking, source of drinking water, separate room for cooking, ownership of house, ownership of agriculture land, ownership of irrigated land, ownership of livestock and ownership of durable goods (IIPS and ORC Macro, 2007). Using the total score, a household is categorized as belonging to one of five groups as poorest, poorer, middle, richer and richest. We have club last two groups as poor as (poorer plus poor) and richer (richer plus richest).

Region of residence: For constructing this variable, NFHS categorization according to the six major geographical locations having more or less similar cultural settings have been used: North (Jammu and Kashmir, Himachal Pradesh, Punjab, Haryana, Rajasthan, Delhi and Uttarakhand), Central (Uttar Pradesh, Madhya Pradesh and Chhattisgarh), East (Bihar, Jharkhand, West Bengal and Odisha), North-East (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura), West (Gujarat, Maharashtra and Goa) and South (Andhra Pradesh, Karnataka, Kerala and Tamil Nadu).

Sanitation facility: Household that have either a flush or pit latrine whether private or shared, are regarded to have safe sanitation as opposed to those without any facility (unsafe);

Safe Cooking fuel: The households using liquefied petroleum gas (LPG), electricity, kerosene and biogas are considered user of low polluting fuels (safe). Those using charcoal, firewood and coal regarded as users of high polluting fuels (unsafe).

Safe drinking water: Households with access to private or public piped or tap (hand pump) water as well as covered well water are considered to have safe water.

For levels and trends analysis by social group, the definitions used by NFHS, which are the standard definitions have been used for the study. The probability of dying after the first month of life but before the first birthday; Infant mortality ($_1q_0$): The probability of dying before the first birthday; Under-five mortality ($_5q_0$): The probability of dying before the fifth birthday.

For multivariate hazard analysis, here, we defined dependent variable is time (age of the child) and survival status of child (1 if event is occurred i.e., child died and 0 if child is alive) during period of infant (< 12 months) and under-five mortality (0-4 years) before attending his/her 5th birth day respectively.

Independent predictor variables: The independent predictor variables are selected based on previous research studies significant factors influence survival of the infant and child. In developing countries including India, mother's education has been considered to have a strong effect on the mortality of infant and young children (Das and Dey 2003; Khasakhala 2003; Rama Rao *et al.* 1997, Koenig, 1992; Khasakhala, 2003).

In a country as large and geographically fragmented as India, considerable variation in child mortality among states is not surprising. A general decline in child mortality has been observed throughout the state over time, but disparities in level of child mortality remain. It has been observed that states may be categorized in few groups, though not necessarily states in a group are contagious, but their trends in vital rates are similar.

Environmental variables are likely to gradually affect health indicators such as anthropometric measurements and morbidity (Bhargava, 1994). Living conditions especially water supply and toilet facilities, directly affect contamination of household environment and thus may facilitate the dissemination and incidence of various infectious diseases, particularly diarrhoea. The use of biomass fuels for cooking and heating inside the dwelling may increase the incidence of acute respiratory infections (ARI).

Based on previous research studies significant factors influence survival of under-five children, we have considered the following predictor variables:

1.   Mother's Education (No education, literate up to 10 years education, 10+ years of education);
2.   Mother's age at marriage (< 18 years, >= 18 years);
3.   Place of residence (Rural, Urban);
4.   Mother's Occupation (Not working, Working at home/outside home);
5.   Mother's age at the time of child birth (<20, 20-24, 25-35, 35+);
6.   Birth order (1, 2-3, 4+);
7.   Preceding Birth Interval (<24 months, >= 24 months);
8.   Mother's BMI (<18.5, 18.5 - 25, 25+);
9.   Mother' Anaemia status (No anaemia, Mild, Moderate/Severe);
10.   ANC Visits (No ANC visit, 1-2 visits, at least 3 visits);
11.   Delivery type (Normal, Cesarean section)
12.   Place of Delivery (Institution, Home);
13.   Assisted during delivery (Doctor, health professional, Home);
14.   Size of the Baby (Large, Average, small);
15.   Sex of the Child (Male, Female);
16.   Region of residence (North, Central, East, North-East, West, South);
17.   Household Wealth Index (Poor (Poorest+Poorer), Middle, Richer(Richer+Richest);
18.   Sanitation Facility (Safe/Unsafe);
19.   Cooking Fuel (Safe/Unsafe);
20.   Source of Drinking Water (Safe/Unsafe);

Methods: The univariate and multivariate Cox hazard regression model was used to assess the impact of child and maternal, socio-economic, living condition and programme variables on infant and under-five mortality. Results of the multivariate analyses are presented as hazard ratios (risk of dying). If hazard ratio is > 1 for a predictor variable, it means that the hazard is higher, *i.e.* increased risk of death and if hazard ratio is < 1, it implies a decreased risk of death.

Results: Key Findings: There are two models i.e., Model-I: Univariate significant predictor variables with birth interval ; Model-II: Univariate significant predictor variables without birth interval. Key findings are given below:

Significant predictor factors associated with Under-Five Mortality—Combined(Rural+Urban)	
Model-I (with Previous Birth Interval)	**Model-II (without Previous Birth Interval)**
Previous Birth Interval, Mother's Anaemia status & Size of the baby are significant predictor variables associated with under-five mortality across all social groups	Size of the baby is the significant predictor variable associated with under-five mortality across all social groups
In addition above predictor variables :	
Mother's age at marriage , Mother's working status & Region of residence - SC	Mother's age at marriage , Mother's working status , place of delivery, assisted during delivery & Region of residence - SC
ANC visits – ST	Birth order, Mother's anaemia status & ANC visits – ST
Mother's age at marriage , birth order & place of delivery –OBC	Mother's education. Mother's age at marriage , birth order , Mother's BMI & Region of residence–OBC
Mother's age at the time of child birth & region of residence - Other social groups	Mother's education, Mother's age at the time of child birth, Mother's BMI, & Mother's anaemia status - Other social groups
Multivariate Significant predictors of Under-Five Mortality—Rural	
Model-I (with Previous Birth Interval)	**Model-II (without Previous Birth Interval)**
Previous Birth Interval & Mother's Anaemia status are significant predictor variables for under-five mortality across all social groups in rural India	Size of the baby, Birth order & region place of residence are the significant predictor variable for under-five mortality across all social groups in rural India
In addition above predictor factors :	
	Mother's education, Mother's age at the time of birth, & mother's anaemia status – SC
ANC visits – ST	Mother's anaemia status & Wealth index – ST
	Mother's age at the time of child birth, Mother's anaemia status & wealth Index–OBC
Mother's age at the time of child - Other social groups	Mother's education, Mother's age at marriage, Mother's age at the time of child birth, & wealth Index- Other social groups

Conclusion: Most significant predictor factors associated with under-five mortality across all social groups are Previous Birth Interval, Mother's Anaemia status & Size of the baby. ANC visits is the additional significant factor to determine under-five mortality among ST population

3. **Estimation of Malaria Burden in India: A prospective national study to validate recently proposed methodologies of burden estimation in India".**

Collaborative project: National Institute of Medical Statistics and National Institute of Malaria Research, ICMR, New Delhi.

Project Period: 2015-16
Funded by: MoHFW, GOI

Background: The National Vector Borne Diseases Control Programme (NVBDCP), Ministry of Health & Family Welfare, Govt. of India frames technical and operational guideline for diagnosis and treatment of malaria and vector control. As per 2016 declaration, India aims to achieve elimination of malaria by 2027 and attain countrywide malaria free status by 2030. The present exercise aims to estimate the disease burden due to malaria in India particularly the deaths due to malaria which could help in accelerating the programme efforts and set realistic goals to achieve targets.

As reported by Dhingra et. al., 2010, the estimated deaths below the age of 70 years was 205000 attributable to malaria/annum. As the estimates were about 300 times more than the deaths reported to the national programme by the state health authorities, this publication sparked intense debate on methodology adopted for these estimates. Medical Certification of Cause of Death estimated about 144000 due to malaria in India in 1997-98. Recently global malaria mortality trends have been published which suggest that there were 46970 (14757-94945) malaria deaths in India in the year 2010 (Murray et al., 2012).

Considering above, Government of India constituted an expert committee to estimate malaria cases and malaria mortality in the country. The committee arrived at a mathematical model to utilize the available data from surveillance and surveys and provided an estimate of 9.751 million cases of malaria and 40297 deaths due to malaria (30014-48660) in India in the year 2010 (Govt. of India, 2011).

The report was presented to Director General of Health Services (DGHS), Govt. of India by the committee, but he suggested that a study may be carried out to estimate current burden of malaria morbidity and mortality in India that will validate the methodology and results. In this situation, the National Institute of Malaria Research (NIMR, ICMR) in collaboration with National Institute of Medical Statistics (NIMS, ICMR) and National Vector Borne Diseases Control Programme (NVBDCP) have carried out intensive one year field Study to estimate burden of malaria in three different eco-epidemiological zones of India. The study design, sampling methodology and operational plan of study protocol was developed and finalized after approval by a Technical Advisory Group with Dr. Shiv Lal on Chair and other experts in the subject constituted at the NVBDCP.

Objective: The specific objective of the study was to determine malaria incidence (morbidity) and deaths (mortality) due to malaria in districts representing zones of high, moderate and low risk of malaria in India.

Expected outcome:
1.   Estimation of malaria cases and deaths due to malaria in India, and
2.   Validation of indicators used in the model for malaria estimation.

Coverage of Study Population: Thus, the overall population coverage of selected study areas for malaria surveillance was 12,15,114 which was spread in all three regions with coverage of 4,08,345 in high, 4,09687 in medium and 3,97,082 in low endemic areas in surveillance arm. The population coverage for death enumeration were 1225358 (High: 410022; Moderate: 403139; Low:412197) in all the three regions. The population coverage of each study area was part of the sample worked out for all three regions.

Data Analysis:

Active and Passive Case Detection: Malaria surveillance was started in the month of August, 2015 in (Chatra, Jhabua, Dakshin Kannada and Jaipur district) all the selected four districts. However, it was initiated one month earlier in Kolhapur (July, 2015) and one month later in Koraput (September, 2015). Accordingly, the field work was completed in the month of September, 2016 and the data collected from all the six sites was received by NIMR/NIMS for checking and processing. All the fever and malaria cases captured during one year active surveillance and passive cases have been processed. The verbal autopsy forms of death cases were also processed and cause of death was assigned by the physicians and compiled for each district.

During active surveillance in high endemic area, more than three thousand malaria cases were captured in Koraput, Odisha (3128 with TPR 20.9%) and about four hundred cases in Chatra, Jharkhand (395 with TPR 2.12%). In the medium endemic area, the total malaria cases captured in one year of active surveillance was about one thousand five hundred i.e. 1499 malaria cases with TPR 18.4% in Jhabua, Madhaya Pradesh, but cases in Dakhin Kannda were less in active surveillance (30) compared with passive surveillance (7641). In the low endemic area, the malaria cases captured in active surveillance were less (3 in Jaipur and 79 in Kolhapur) with a very low TPR (<1%).

In high endemic area, the TPR was recorded 19.4% with more than twelve thousand positive malaria cases in Koraput study area, whereas it was 4.6% TPR with 521 positive cases in Chatra. In medium endemic area, the Jhabua district has recorded 448 malaria cases with SPR 4.0% whereas Dakshina Kannada recorded 761 malaria cases with SPR 6.6%. The low endemic areas recorded less than 100 malaria cases during passive surveillance in both the districts i.e. Jaipur and Kolhapur. The proportion of passive surveillance of Malaria cases was higher in Government health services in the Koraput, Jhabua Kolhapur and Jaipur districts. However, it was higher in Private health agencies such as Chatra and Dakshina Kannada district.

In the three study regions (High, Medium and Low), the TPR was recorded high in Koraput (19.7) and Jhabua (9.3), but it was low in other areas. The proportion of Pf cases was also recorded high in Koraput whereas it was comparatively low in other areas.

The estimated number of malaria cases and deaths due to malaria are provided in the project report submitted to NVBDCP, MoHFW, GOI. The report is presented in the Technical Advisory Group meeting on 15th February, 2017 held at NIMR, New Delhi and subsequently the report was presented and discussed in the meeting organized by NVBDCP, MoHFW, New Delhi on 30th August, 2017.

4. Base line household malaria survey in high endemic areas of four states of India

(A collaborative project with National Institute of Malaria Research, New Delhi)

Project Period: 2013-15
Project Funded by World Bank, MoHFW, GOI.

National Institute of Malaria Research (NIMR) and National Institute of Medical statistics (NIMS) were identified for World Bank assisted project to estimate key indicators related to malaria control and treatment care, know the various operational challenges faced by malaria control programme at community level. The information thus collected would also serve as the bench mark data for the project areas where intervention would be carried out.

The Base line household survey was carried out in 4 states i.e. **Gujarat, Maharashtra, Karnataka and West Bengal.**

Overall objective: The overall objective of the survey was to find out the current status of malaria in high endemic areas where the intervention measure to be undertaken by malaria control programme.

Specific objectives of the baseline survey:
1. Two-week of fever cases and treatment care
2. Prevalence of fever on the day of survey
3. Household ownership and use of mosquito bed nets by households
4. Effective coverage of Indoor Residual Spraying (IRS)

The survey schedules used to gather information in the household survey were 1) House listing formats with fever cases; 2) household information on Bed nets, Insecticide Residual Spraying (IRS) etc.; 3) Last two week fever/treatment record; and 4) Information about the fever on the day of survey.

Survey Coverage: The survey was carried out in all the 80 randomly selected villages in each state, but the coverage was slightly lesser in Jharkhand (78) and Odhisa (79) due to insurgency, inaccessibility and other administrative reasons. Household coverage during the survey was 1591 in Gujarat, 1465 in Maharashtra, 1619 in Karnataka and 1494 in West Bengal. Number of fever cases (Last two week fever) interviewed was also varying from one state to other (112 in Gujarat, 183 in Maharashtra, 289 in Karnataka and 196 in West Bengal).

Summary of findings: The point prevalence of fever on the day of survey was recorded high in Maharashtra (3.04%) followed by Gujarat (1.62), West Bengal (1.27) and Karnataka(1.08). The proportion of fever cases contacted with health care provider, private or public, within two days of fever was varying between 67.2% in Maharashtra to 24.2% in Karnataka. Proportion of those fever cases got their blood tested within 2 days varied between 47.3% in Gujarat to 10.7% in Karnataka. Proportion of cases who received the treatment within 2 days of fever were from 8.3 (Karnataka) to 49.1% (Gujarat). Proportion of cases who received ACT within 2 days of fever ranged from 7 (Karnataka) to 13.4 (Gujarat).

The information collected about the availability and bed net use among the households was recorded as 437 nets in Gujarat, 248 in Maharashtra, 321 in Karnataka and 1831 in West Bengal. Proportion of houses where LLINs were available varied from 28.7% in Karnataka to 57.1% in

Gujarat. The individuals slept under LLINs in the previous night ranged from 0% in Karnataka and Maharashtra to 1.5% in West Bengal. Proportion of individuals slept under any net in the previous night ranged from 2.5% in Gujarat to 33.9% in West Bengal.

The proportion of households reporting that their house had been sprayed in the six months prior to the survey varied from 21 % in WB to 90 % in Maharashtra. It was reported that the house had been sprayed at least twice except West Bengal (1.4 %). The proportion of houses where at least one room was uniformly and completely sprayed ranged from 4.2 (West Bengal) to 57.2 % in Maharashtra.

The final report incorporating the suggestions given by experts/reviewers was submitted to NVBDCP, MoHFW in 2017.

5. End line household malaria survey in high malaria endemic areas of five states of India

(A collaborative project with National Institute of Malaria Research, New Delhi)

Project Period: 2014-16
Project Funded by World Bank, MoHFW, GOI.

The World Bank aided intervention project on Malaria control were initiated in India in August 2008 in several high risk and high *falciparum* incidence districts of India. The project introduced more effective intervention measures for the control and management of two serious vector-borne diseases in India: malaria and kala azar. It was envisaged to assist the Government of India (GOI) to significantly improve health of India's poorest people. The investment in the project was mainly for strengthening the health system and reducing the burden of malaria and Kala Azar.

National Institute of Malaria Research (NIMR) and National Institute of Medical Statistics (NIMS) of ICMR were identified for World Bank assisted project to estimate intervention coverage, some key indicators of malaria control programme at community level. The information thus collected would also serve as community based data of the project areas to monitor the changes over period. National Institute of Malaria Research (NIMR) and National Institute of Medical statistics (NIMS) were identified for World Bank assisted project to estimate key indicators related to malaria control and treatment care, know the various operational challenges faced by malaria control programme at community level.

The survey was undertaken as the End line household surveys in 5 states i.e. **Odisha, Andhra Pradesh, Chhattisgarh, Madhya Pradesh and Jharkhand**

Overall objective: The overall objective of the survey was to estimate the key indicators to know the changes over base line after various interventions coverage to control malaria.

Specific objectives of the end line survey:

1. Treatment seeking behaviour of last two-week of fever and treatment taken
2. Promptness of treatment for fever/malaria
3. Sources of treatment for fever (health seeking behaviour)
4. Household ownership of mosquito bed nets

5. Use of bed nets among the households
6. Effective coverage of Indoor Residual Spraying (IRS)

Survey Coverage: The survey was carried out in all the 80 randomly selected villages in each state, but the coverage was slightly lesser in Jharkhand (78) and Odhisa (79) due to insurgency, inaccessibility and other administrative reasons. Overall, response rate was above 95% in all the states except Jharkhand (88%). The fever cases captured during the household survey was also lower than the expected number of fever cases (about 1500). It was possibly due to low occurrence of fever during the time period of survey.

Summary of Findings: The Slide Positive Rate for Malaria was recorded 19% in Chhattisgarh, 13% in Jharkhand, 10% in Madhya Pradesh, 9% in Andhra Pradesh and 6% in Odisha. The variation in the slide positive rate in different states was possibly due to differential level endemicity and seasonal variation. The proportion of fever cases coming in contact with any health care provider, private or public, within two days of fever varied widely across states, from about 59% in Andhra Pradesh and to about 90% in Chhattisgarh. The proportion of fever cases who reported having a blood test within two days of fever varied from less than 25% in MP to 58% in Chhattisgarh. The proportion of cases diagnosed within two days of fever varied across states, from about 21% in Jharkhand and to about 60% in Odisha. More than half of all fever cases in Madhya Pradesh, and almost half of such cases in Odisha and Andhra Pradesh received treatment within 2 days of the start of fever. However the corresponding figure for Chhattisgarh and Jharkhand were rather low (less than 30%). More than 50% of such treatment appears to have included Chloroquine in Chattisgarh, Andhra Pradesh, Odisha, and 90% in Madhya Pradesh . The use of ACT was very low in all the states except in Jharkhand (63%).

Among households, any bed net owned by them was recorded high in Odisha (70%), but it was about half of the household in Chhattisgarh (57%), Andhra Pradesh (53%), and slightly less than half in Jharkhand(45%), very low in Madhya Pradesh(20%). Bed Net use while sleeping was found about 50% and more in all states. Most nets in the sample were reported to have been free of cost from NGOs / Govt. agencies ranging from about 99% of the nets in Andhra to about 75% in Orissa except Jharkhand (9.6%).

In the LLIN distributed area, the LLIN nets among the households were recorded more compared with the area where LLIN not distributed. However, no such difference was recorded in Madhya Pradesh and Jharkhand states.

Assessment of IRS related indicators; it was recorded high among households in Chhattisgarh (82%) and Andhra Pradesh (79%). In other states, it was comparatively low (45% in Odisha, 41% in Madhya Pradesh and 22% in Jharkhand. The effective and uniform spray of IRS was observed high in Andhra Pradesh compared with other states. Bed net use while sleeping was found about 50% or more in all states. The final report incorporating the suggestions given by experts/reviewers was submitted to NVBDCP, MoHFW in 2017.

6.   Burden of Disease due to Cancer in India

Study Initiated: November 2014
Study Completed: March 2016
Funding: Intramural

Background: With the demographic transition non communicable diseases like cancer have become a major cause for concern with the planners of health delivery system in midst of already existing communicable diseases. Non communicable diseases were estimated to claim more than 36 million lives worldwide in 2008. Major contributors to this burden were cardiovascular disease, cancer, chronic respiratory diseases, and diabetes. Cancer needs a policy with specificity as compared to other diseases because of heterogeneity. Cancer varies in its geographical distribution, etiology, and pathology. With the coming up challenges cancer could be considered as public health issue now.

In view of the increasing load it would be worth looking at the disease burden in terms of life time risk, persons years of life lost due to cancer (premature) mortality, It would also provide an idea about on an average how many years a person is dying prematurely as a result of the disease which otherwise would have averagely lived to the life expectancy. The change could be seen over the years.

Objective: To study the disease burden due to cancer in Indian population based on the data generated through National Cancer Registry Program of Indian Council of Medical Research in terms various approaches life time risk, premature mortality, magnitude, absolute cases.

Data Source: Morbidity and mortality data as available through National Cancer registry Program of India of ICMR. Population projections and other vital events from reports available through Registrar General of India Sample registration scheme are used to carry out various computations.

Results

Life Time Risk: Cancer is considered to be the second most common leading cause of morbidity and mortality worldwide. Hence, estimation of lifetime risk of cancers are commonly used in the clinical/health-care evaluations. The life time risk is a measure of a chance of a person of development or dying from cancer during entire lifespan. We use statistics generated by sample registration of selected population based cancer registries (from Bangalore, Mumbai, Chennai, Bhopal, Delhi) of National Cancer Registry Program of Indian Council of Medical research (ICMR) for the year 2009-10 as a life table data. Estimating expected number of cancer cases and cancer deaths to estimate life time risk of development of cancer. This has been compared with Cumulative incidence rates and cumulative risk.

The Life time risk of development of cancer in males & females were 9-10% & 10-12% respectively. Through probability approach, life time risk of development of malignancy was highest in Delhi (8.9%) followed by Chennai (8.7%), Mumbai (6.5%). The life time risk of development of stomach and oesophageal cancer ranged from 0.2-0.9% & 0.3-0.6% respectively. Highest risk of lung cancer was 1% in Delhi & Chennai each. The risk of development of oral cancer was highest in Bhopal. The risk of Prostate cancer was same in all the registries i.e. 0.5%. In females, risk of development of cancer of any sites was highest in Bangalore (11.4%) followed by

Chennai (10.6%) & Delhi (9.7%). The life time risk of development of breast cancer was highest in Bangalore (3.2%) followed by Chennai & Delhi with 3.2% & 2.3% respectively. The life time risk of cervical cancer was highest in Bangalore (1.7%) & lowest in Mumbai (0.9%). Risk of tobacco related oral & lung cancer was much lower in females as compared to males, ranging from 0.3-0.5%. The concept of life time risk of development of cancer of any site was looked at considering with or without competing risk but it was observed that while comparing estimates considering with competing mortality and without competing mortality the risk was almost 1% lower giving a precise estimate.

Pre-mature Mortality: Two-thirds of the world's cancer deaths are being recorded In economically developing countries. Improvement in survival rates have been noticed but its existence continue to increase and cancer accounts for 8.2 million deaths and 196.3 million years of healthy life lost globally each year Person years of life lost has been suggested as the measure of the premature death. Premature mortality period is the estimation of total person years of life lost as a result of cancer mortality due to cancer of any site up to 75 years. The published data on age specific death rates for the Mumbai Registry from reports of the National Cancer Registry Program of ICMR for the year 2009-10 served as the basic material. Years of potential life lost (YPLL) is an estimate of premature mortality. The expected years of life lost (YLL) is a measure for identifying and ranking the underlying causes of premature death.

From general mortality data, person years of life lost/ 100,000 population due to cancer of any site among males ranged from 220 in Delhi to 518 in Mumbai. In males, looking at the individual sites, for oral cancer, the person years of life lost/ 100,000 population ranged from 11.3 in Delhi to 46 in Mumbai. The estimates of YPLL were 50.4 in Chennai followed by 38 in Bangalore for stomach cancer & 60 in Bhopal followed by 58.3 Chennai for lung cancer. For stomach, lung & prostate cancer, the average years of life lost ranged between 22- 26 years, 23-24 years & 20-21 years respectively. Non Hodgkin's Lymphoma (NHL) is seen in younger ages and results in early mortality, on average person losses about 30 years of precious life because of dying from NHL. From general mortality data, the person years of life lost/100,000 population due to cancer of any site among females ranged from 234 in Delhi to 740 in Mumbai. When individual sites are considered in females, it was observed that person years of life lost due to breast cancer based on Mumbai registry was 176 per lakh population which is about 20% of estimate as result of loss due to all cancers. For cervical cancer, it was observed that 55 person years were lost/100,000 population based on Mumbai data followed by 56 as reveled from Bangalore data. The average loss of life due to cervical cancer ranged from 27 years to 31 years. Ovarian Cancer contributes 10% of pre mature mortality. Estimate of the person years of life lost/100,000 population in Delhi, Mumbai, Chennai & Bangalore were 2. 19, 16.8 & 16.5 respectively.

Valued Potential Years of Life Lost: Potential Years of Life Lost (PYLL) is an often used statistic in practical epidemiology and demography. The measure is easy to calculate, easy to understand and could be directly taken by program people. The PYLL i.e., Person years of life lost is a measure of premature mortality based on the expected years a person could have lived under the assumption of current mortality pattern. This does not take into account the relative importance of the age groups where the mortality occurred. There are various approaches where the weights to the different age groups could be assigned considering the contribution made by an individual to the society before experiencing pre mature mortality. There is no doubt that death at any age is a loss to the family and a society.

Academically it may be important to study this loss through pre mature mortality considering weights in different age groups. This intends to measure the productive contribution of the

individual who has dies prematurely due the disease, cancer in this particular exercise. There could have been many options while deciding on the cut off years for productive and non productive years. The present exercise considers 0 to 15 year as the investment period where an individual receives from the society and from 15 to 64 years he contributes may be considered as the productive years and again beyond 65 years are considered as investment years. As mentioned earlier there no statistics which can measure presence of precious human life. These computations are academic exercise just to the magnitude of loss if it is a very early mortality due to disease in consideration. The present exercise attempts to estimate VPYLL per 10, 00000 populations through estimated net loss and mortality estimates from the cancer registry data as available from national cancer Registry Program of ICMR. It may be mentioned that these assumptions are based only for assigning weights and does not intend to undermine the valuable presence of elderly population in the society whose contribution in different forms is of utmost importance and cannot be quantified.

As per assumptions this is (loss) considered as negative if the person dies before 65 years. The calculations have been restricted to 65 years to study the premature loss. The person if dying in the age group of 60-65 then the difference of mid age group 62.5 to the life expectancy is considered as the years of consumption which he did not consume. The aim of such an exercise is to understand the degree of pre mature mortality. The higher the negative value would refer means the relatively higher contribution made to the society or productivity as a result of pre mature mortality due to disease, the cancer as a whole or a specific site in consideration. The positive values indicate very early death i.e., in before 15 years. As cancer is a disease of later age group this situation may not arise. The computation have been carried out using the morbidity and mortality data from National Cancer Registry Programme (2009-10) and state wise life expectancy data from registrar General of India for the corresponding years.

It is observed that Valued Potential Years of Life (VPYLL) based on pre mature cancer mortality for the urban registries being considered in this exercise ranged from -2086 in Bhopal to -20841 in Mumbai. Observing this for per 100,000 population the estimates ranged between -195 to 370. As expected all the VPYLL are negative for the reason that cancer occurs in the later age group. The other measure PYLL does not consider relative importance of age group where the mortality has occurred.

7. Application of Bongaarts model to study the proximate determinants of human reproduction process in India.

Study Initiated: January 2015
Study Completed: March 2016
Funding: Intramural

Background: India is one of the overpopulated countries in the world. It is a country of about 1210.2 million people as per census 2011. In the year 1901 population was 238.4 million. In the year 1971 population was 548.16 million. This population size is increasing such a huge number of people living in this country create a severe pressure on its agricultural lands, forests and other natural resources. It is essential to control the population growth rate of this country and establish a policy that can help to utilize its existing population. Actual fertility is determined by a complex set of biological, socio-economic, political and psychological factors. Therefore social scientists belonging to different disciplines have developed elaborate theories of fertility suited to their disciplinary approaches. Simultaneously, attempts have also been made to develop a holistic theory

of fertility to systematize researcher's thinking on the determinants of fertility and family planning interventions. Attempts have been made to answer what determines fertility and what determines the determinants of fertility. The intermediate variables framework and the model of proximate determinants of fertility are two important contributions in this direction. In 1950s when systematic empirical work on fertility was started in the context of less developed countries, demographers found that the levels of fertility were associated with the socio-economic conditions. It was then, that they started looking for a framework that could explain the available empirical relationships.

Objective: The main objective of the study is to demonstrate the application of the Bongaarts model to study the proximate (behavioural) determinants of human reproduction process. The specific objectives are:
- to estimate Cm, Ci Ca Cc and TFR over time i.e., 1992-93, 1998-99 and 2005-06.
- To do extensive review of literature on application of Bongaart's model to estimate TFR & Total Fecundity (TF) (as per SAC recommendation).
- To estimate factors contributing to the changes TFR over time.

Data and Method:

The Data required for the estimation of proximate determinants of fertility are total fertility rate, contraceptive prevalence rate, induced abortion rate, proportion of married women in the reproductive age group, postpartum amenorrhoea or the duration of breastfeeding. Three rounds of the India's National Family Health Surveys (NFHS-1, NFHS-2, NFHS-3) for India and major states were used for this study.

Results: The study estimated the relative contribution of each proximate determinant (marriage, contraception, postpartum infecundability and abortion) to the current level of fertility and then compared the results with the state and national level. Also, the study estimated the levels of fertility (Total Fertility Rate (TFR), and Total Fecundity (TF) of the study population.

Conclusions: Among the proximate determinants of fertility, postpartum infecundability takes the lion share of abortion, followed by marriage factors at state and national level.

B. Ongoing Studies

1. ## NACO's HIV Surveillance and Estimation
    Period: April 1 2016 -: March 31, 2017
    Funding Agency: NACO, New Delhi

    Introduction: The ICMR-National Institute of Medical Statistics (NIMS) is the lead agency for estimation of HIV burden in India and states. It collaborates with National Institute of Health & Family Welfare (NIHFW) for the surveillance and undertakes analysis and estimation of HIV/AIDS burden and preparation of analytical report of HIV sentinel surveillance (HSS) data since 2002. The activity adopts a systematic and consultative process for estimation HIV burden in the country with the help of a national working group under the guidance of Technical Resource Group at NACO. The last round of HIV Estimations was conducted in the country in 2015. Next round of estimation will be carried out in the year 2017. The main activities of this period to participate HIV surveillance activates conducted by NACO, and supervise data collection of few States as central team member, and preparation for the next round estimation.

    HIV Sentinel Surveillance (HSS) is one of the vital components of second generation surveillance system in India to track the HIV epidemic in the country with the objective of understanding the level and trends of HIV epidemic among different population groups as well as to identify the spread of the epidemic to new pockets. It is implemented with the support of two national institutes and six regional institutes of India. The implementation structure is presented in Figure 1.
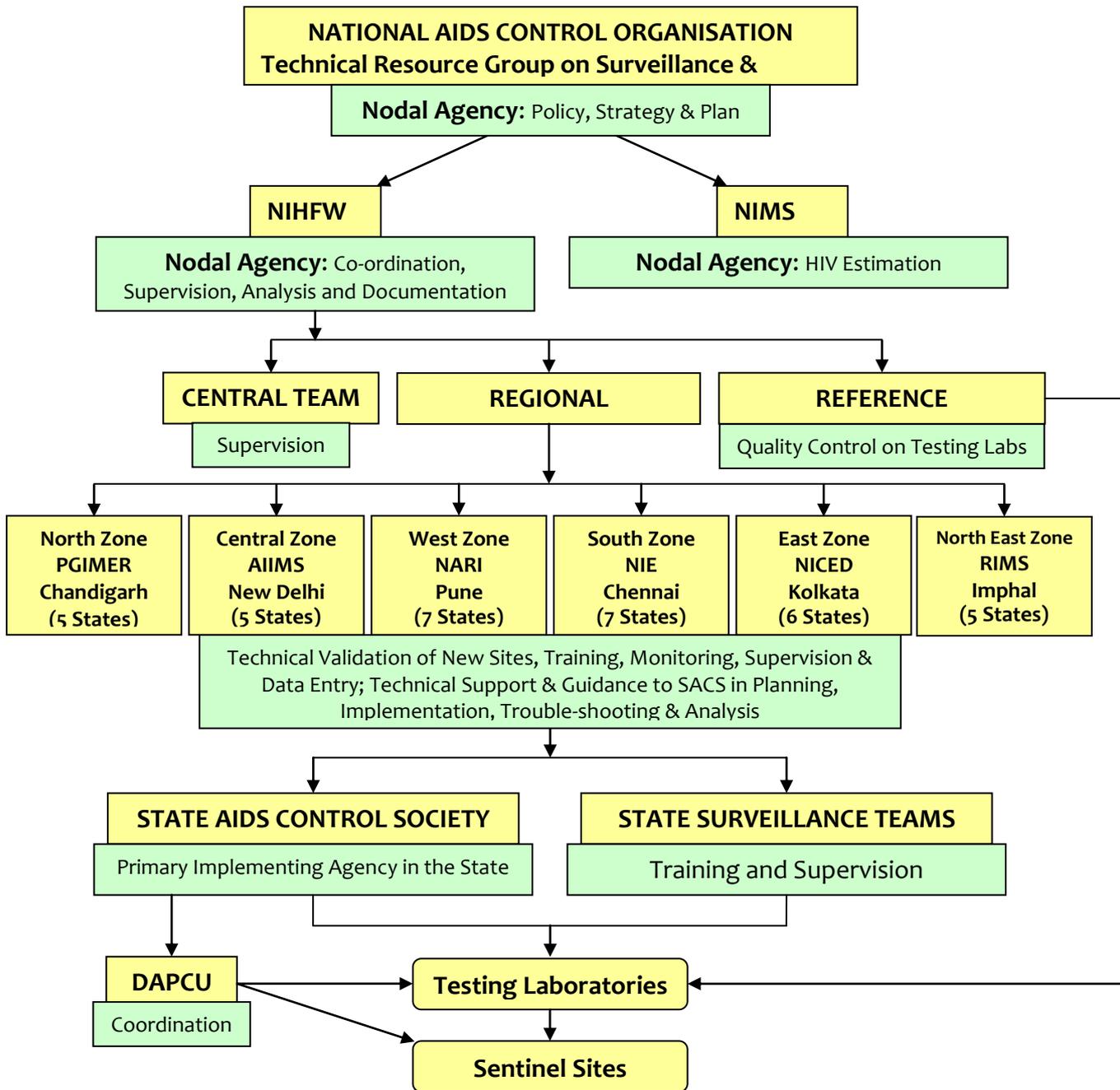
Fig. 1: Implementation Structure of HIV Sentinel Surveillance

Activities during this period:

1. Population Projection: Demographic projection is an important component of HIV Estimation using DemProj module of Spectrum. The first step HIV estimates process was to updating demographic projections based on latest Census data (2011). The DemProj module of Spectrum was used for projecting the population for 35 States of India by age and sex based on three components of inputs i.e., fertility, mortality and migration. Demographic projection included estimation and projection of population by age and sex for the period of projection (1981-2026). Separate projections for each of the 35 states were prepared for which HIV estimation was undertaken. This

required state-specific inputs on population size by age and sex for the base year 1981, and inputs on following for the period of projection (1981-2026): level and age-specific pattern of fertility, sex-ratio at birth, level and age-specific pattern of mortality, and volume and age-sex distribution of net-migration. Separate set of inputs on these indicators were derived for each of the 35 States by using several data sources including census, Sample Registration System (SRS), and large-scale National Family Health surveys (three rounds) in the country. Detailed review of demographic projections and necessary adjustments were undertaken to ensure that the results matched with Census 1981, 1991, 2001 and 2011 data. The results need to be validated in 2017 rounds estimation by NWG experts.

2: Participated all meetings organized by NACO for HSS round 2016-17 i.e., international consultation meeting on HSS, pre surveillance meeting, central member meeting and review meeting for the surveillance round.

HIV Consultation meeting under India State-level Disease Burden Initiative organized by ICMR, & PHFI at ICMR, New Delhi, October 18, 2016.
Capacity Building workshop on OR, Ethics and Data Analysis in HIV/AIDS from Jan 30- Feb 2, 2017 Organized by NACO, WHO & CDC at Taj Mansingh, New Delhi.
Participated as Member in HIV Sentinel Surveillance 2016-17 National Pre-Surveillance Meeting of Central Team Members at Conference Hall, NIHFW organized by NIHFW, January 31, 2017.
Participated 2nd National Core Group on Elimination of mother to child transmission of HIV and Syphilis in India, on Feb. 6-7, 2017, New Delhi organized by NACO and UNICEF, New Delhi, February 6-7, 2017.
Participated National dissemination workshop on HIV Allocative Efficiency Study, OPTIMA, at The Royal Plaza, New Delhi organized by NACO, World Bank and PHFI, New Delhi, March 2, 2017.

3: Monitoring and supervision of HSS 2016-17 round data collection for assigned States also during training for site staff of ANC surveillance.

4: Data management and preparation of Inputs data for 2017 round of Estimation: All HSS data from 1998 to latest HSS 2014-15 round data for ANC attendees & HRG population (FSW, MSM & IDU), bridge population long distance truck drives are not able use because no. of sites check for validity; NFHS-3 & National IBBS data compilation, programme data (ART & PMTCT data) collection are redistributed according to WHO guidelines, consistency check, and compilation were completed, also inputted into spectrum for 2017 round of estimation.

5: The EPP estimates the trends over time of HIV prevalence by fitting an epidemiological curve to the surveillance data provided by HIV sentinel surveillance (HSS);
It develops epidemic curve separately for different sub-populations and then combines mathematically to produce a single epidemic curve which estimates HIV prevalence at the national level and validated; Also calculates Prevalence and Incidence for each subgroup and the total population.

6: Changes in Program Inputs, Treatment Eligibility Criterion, Adult Transition Parameters, EPP (curve fitting component) and Sex/Age Pattern of Incidence; Changes in assumptions has many implications. Significant implications included better survival, reduced mortality as well as reduced new infections;

7: NIMS activity report for the period 2015-17 & action plan for the year 2017-18 was prepared and submitted to NACO in month March 2017.

2. National Burden of Non-Communicable Diseases and associated Risk Factors (NCD-BOD)

Date of initiation : February 2017
Expected date of completion : May 2018

Background: India's health system is undergoing positive changes and major strategies are being devised for effective application. One basic ingredient to understand the magnitude of the problem and target limited resources is to determine the burden of disease at particular point in time using data from research studies using appropriate statistical techniques. This strategy provides updated information on the drivers of morbidity, disabilities and mortality at the national and sub national level to make evidence based policy and guide in efficient use of resources. .

Objective: To generate evidence-based, valid and comparable national and sub national estimates of the burden of non communicable diseases and associated risk factors in India.

ICMR-NIMS is a technical partner of the project in the methodology group that will involve in identifying the appropriate methodology for deriving these estimates.

3. Comparing Methods of Assigning Causes of Death

National Institute of Medical Statistics has been participating in WHO's Reference Group on Health Statistics and the member of Working Group for the development of Harmonized Verbal Autopsy Tool. Ministry of Health & Family Welfare and the WHO have commissioned the study "Comparing Methods of Assigning Causes of Death". The activity involves feasibility of implementation of WHO harmonised international standard VA questionnaires in the Indian context; to assess and compare the validity of different techniques (PCVA and CCVA) for assigning causes of death from WHO harmonised VA questionnaires, using the medical record based diagnoses for the select hospital deaths as reference values for validation of VA diagnoses for the same deaths from each of the different techniques; and conduct VA and assign COD in select rural areas with the help of existing health infrastructure and recommend the suitable methodology required for a routine national VA program to ascertain causes of death in India.

The study has so far progressed in the following areas:

1. Till date 3844 gold standard have been established.
2. Verbal autopsy of 610 cases have been done.
3. PCVA of cases has started.
4. Development of server based VA back-up is in progress.

4. Clinical Trials Registry – India (CTRI) www.ctri.nic.in

Date of initiation: April 2006
Funding Agency: Intramural activity of NIMS

Background and objectives: The Clinical Trials Registry – India (CTRI) is a web based system (www.ctri.nic.in) for registering clinical trials being conducted in India. Further, since the CTRI is a Primary Registry of the WHO's International Clinical Trials Registry Platform (ICTRP), it also registers trials being conducted in countries which do not have a Primary Registry of their own.

The CTRI was launched on 20th July 2007 by DG ICMR and is managed by the National Institute of Medical Statistics, Indian Council of Medical Research. The first of its kind in the country, the CTRI displays in the public domain, key details of trials which is expected to bring transparency, accountability and accessibility of clinical trials and their data.

The CTRI was established with the following objectives:

- To establish a search portal which will also serve as a public record system by registering all clinical trials on health products that are drugs, devices, vaccines, herbal drugs and made available to both public and healthcare professionals in an unbiased, scientific and timely manner.

- To create a more complete, authentic, and readily available data of all ongoing and completed clinical trials

- To provide a corrective system against "positive results bias" and "selective reporting" of research results to peer review publication.

- Increase awareness and accountability of all the participants of the clinical trials and also for public access.

- To promote training, assistance and advocacy for clinical trials by creating database and modules of study for various aspects of clinical trials and its registration.

While the CTRI does not have any regulatory authority, on 15th June 2009, the DCGI made it mandatory for all regulatory trials to be prospectively registered in the CTRI. In addition, editors of biomedical journals and several ethics committees also mandate trial registration. Currently, the CTRI registers all types of trials, i.e. interventional, observational BA/BE etc. Moreover, while the global mandate is to register trials only prospectively, the CTRI also registers trials which are ongoing or completed. Since its launch, more than 10,000 trials have been registered, and details of these trials are freely viewable on the website.

Methodology: The CTRI, a web application was developed using open source technology i.e. PHP and MYSQL on LINUX platform, is a purely online and paperless system for registering clinical trials. Registration of trials is free of cost.

To register their clinical trials, Registrants must first register as users (obtain username and password). The username and password may be obtained by accessing the Home Page of the CTRI (www.ctri.nic.in) and clicking on NEW APPLICANT and fill the form online and click on Submit button. Registrants may begin to register their trial once they receive a second confirmatory email activating the user name and password sent in the first email.

After login to CTRI the Registrants may upload trial data by clicking on "ADD NEW TRIAL", and filling requisite data set form that appears. The CTRI form which has to be filled online has 8 parts and may be filled in any order at the convenience of the Registrant. Context information regarding

what each field signifies and what information is to be uploaded is available against each data set point. In addition a prototype filled trial registration data set is available on the Home Page for reference purposes. The trial is available to the CTRI only when the Submit button in Part 8 is clicked. Once a trial is successfully submitted an REF number will be instantly assigned to the trial which is to be quoted in all trial related correspondence. Please note that if an REF number is not assigned, the trial has not been submitted to the CTRI.

Upon submission, the trial is not editable but is viewable. After review by the CTRI scientists, the trial may be sent back in case any modifications or additional information is desired. Verification mails will be sent by CTRI to all mentioned "contact persons." A trial will registered upon satisfaction of all clarifications/modifications requested, submission of approval documents [Ethics and DCGI approval (if applicable)] and receipt of confirmation mail from "contact persons". Once a trial is registered, all details are available in the public domain and any changes (protocol amendments) made to a registered trial are also viewable.

Progress: In January 2017, a consultant was recruited to streamline the trial registration process and initiate new activities in the CTRI.

During the year under report 1495 trials were registered from 1st April 2016 to 31st March 2017 as compared to 1124 trials during 1st April 2015 to 31st March 2016. Every three months reminders are sent to all registrants for updating the registered trials by them. Prior to the launch of new version of the software (March 2011) about 1649 trials were registered. Of these about 90% of the registered trials have been updated as per the new version of the software.
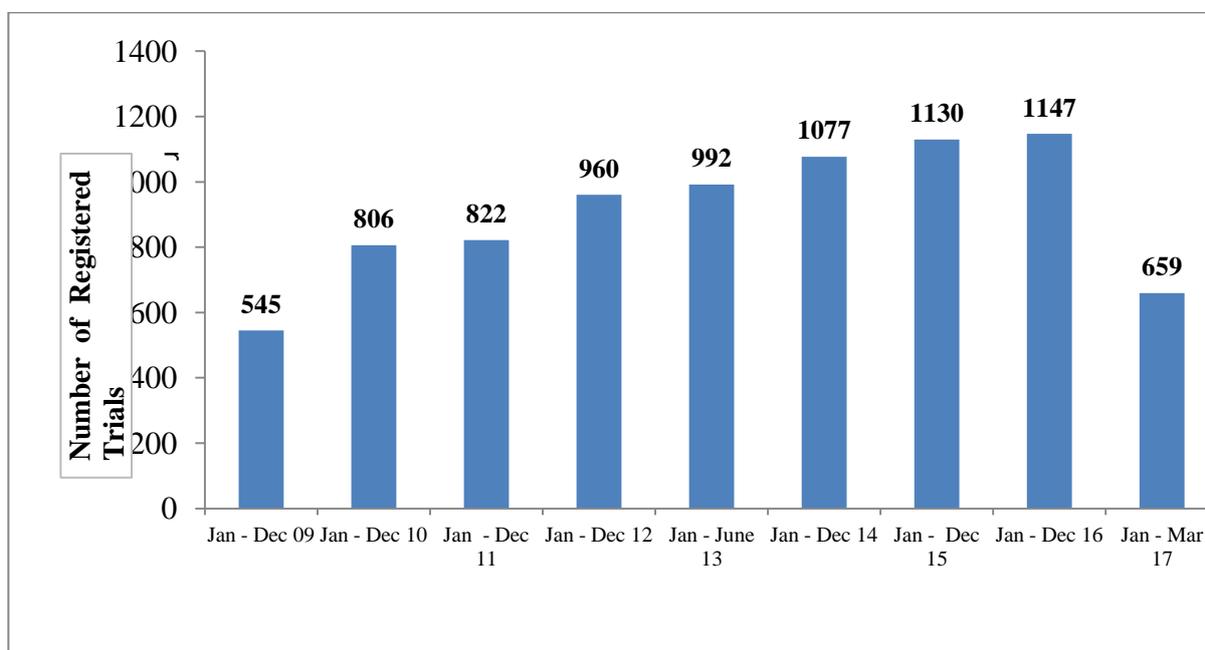
Year-wise trend of trial registration until 31st March 2017
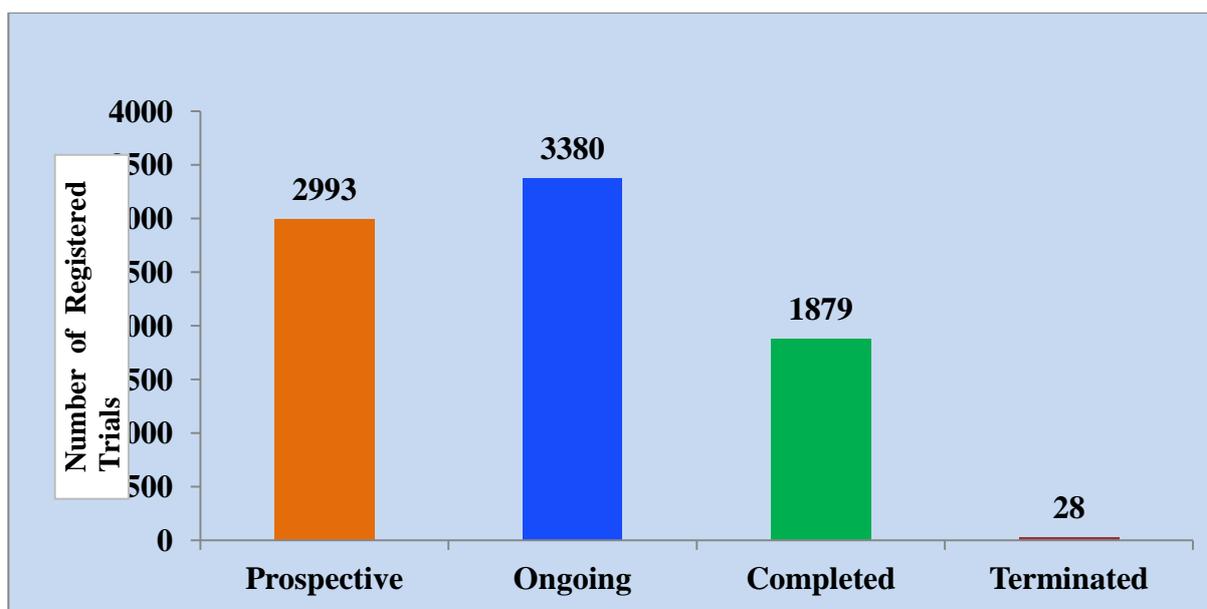
Status of registered trials (Total = 8280)

Comparative status of CTRI until 31/03/16 vs until 31/03/17

Parameter	31/03/2016	31/03/17
Number of Hits	>12,30,000	>1446358
Number of Registered Users	>12,360	>15110
Total number of trials received	11,078	13889
Total Number of Trials Registered	6784	8280
Number of Prospective trials	2394	2993
Number of Ongoing trials	2887	3380
Number of Completed trials	1476	1879
Number of Terminated Trials	27	28
Number of trials under review	2348	2910
Number of Trials sent back for modification	1946	2699

5. Improvement in the Utilization of RCH Services through Male Participation among the Saharia Tribes in Gwalior District, Madhya Pradesh

The present study is an effort to improve the utilization of RCH services, mainly, ANC/PNC and institutional deliveries among the Saharia tribes through male participation in Gwalior district of Madhya Pradesh.

The behaviour of men, their beliefs and attitudes affect the maternal health outcomes of women and their babies. The exclusion of men from maternal health care services could lead to few women seeking maternal health services and as a result worsening the negative maternal health outcomes for women and children. Increasingly, recognition is growing on a global scale that involvement of men in reproductive health policy and service delivery offers both men and women important benefits (Naomi, 2005).

Objectives:
1. To assess the levels of RCH services utilization and male involvement in RCH services among the Saharia tribes in Gwalior district of Madhya Pradesh.
2. To understand the social and cultural barriers and facilitators around male participation in promoting maternal health and institutional deliveries among the Saharia Tribes.
3. To develop a Behaviour Change Communication (BCC) Model, for encouraging male involvement in the maternal care, in the tribal population of MP.
4. To pilot the BCC model in a village for feasibility.

Methodology:

Study Area: Ghategaon-Barai and Dabra block of Gwalior district of Madhya Pradesh. Three villages from each of the selected blocks were selected by two stage stratified cluster random sampling.
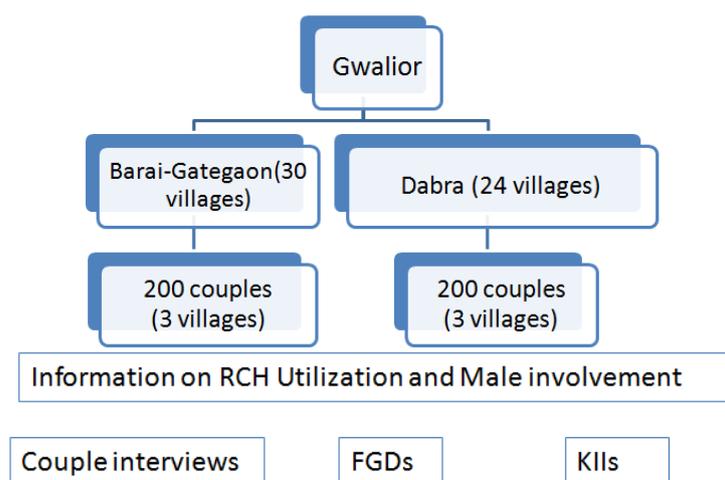
Progress: Field work (couple interview) and FGDs of males, females, and KIs have been completed. The data and digital recording have been transferred to desktop computer and analysed.

After going through the contents of couple interviews and FGDs, it was observed that couples are mostly illiterate and there is low utilisation of ANC and PNC facilities and male participation in it. There is a lack of knowledge about the services being provided at the health centres regarding ANC, delivery and PNC. Most of the male members were working as labourer and cannot accompany their wife to the health centre for ANC, PNC and delivery, hence their participation in maternal and child care is low.

The deliveries are mostly done at home by the elderly women relatives of the pregnant lady. The monetary benefit is not lucrative enough for the villagers for going for the institutional delivery.

Getting the money after institutional delivery is a tedious job for the villagers. There is a widespread corruption at the government health setup.

Most of the families are nuclear and hence unable to leave their house and children alone. Where ever the family is joint, the mother-in-law who has a greater say in the family, is in favour of the home delivery.

Lack of knowledge about the benefits of institutional delivery combined with the hassles of getting the money for institutional delivery and the prevailing conditions in the family results in low utilisation of RCH facilities and institutional deliveries.

6. **Exploratory Geo-spatial Analysis to study the Utilization of RCH services in Northeast states**

Date of initiation :
Expected Date of completion : Oct 2017
Funding agency : Intra-mural

Objective: The board objective of the study is to explore the potential spatial patterns and associations of utilization of Reproductive and Child Health Services.

a)   Visualization of data on utilization of Reproductive and Child Health Services
b)   Spatial statistical analysis on utilization of Reproductive and Child Health Services

Methodology: The present study use District Level Household Survey, DLHS-3(2007-2008) data. The study employ geo-spatial techniques such as spatial visualization methods and use spatial modelling techniques- Moran-I statistics, Univariate LISA, Bivariate LISA spatial error, spatial lag, spatial autocorrelation and Geo-spatial regression to address research questions.

Progress: Visualization of data: the main goals of data visual representation. The transformation of utilization of reproductive and child health data (i.e., received any ANC, at least 4 ANC visit, full ANC, delivery at health facility, safe delivery, Postnatal Care and Contraceptive Prevalence Rate and complete immunization) to information maps is completed. Computation of Moran's *I* statistic and analysis using univariate and bivariate LISA (Local Indicator of Spatial Autocorrelation) is completed. Report writing is in progress.

7. **Decomposing Socioeconomic Inequality in Health among Older Population in India**

Date of initiation: 2016
Expected Date of completion: 2018
Funding agency: Intramural Project

Objective:
  (1) To quantify the socioeconomic inequality in the health of India's older population.

(2) To calculate the relative contribution of the key socioeconomic factors to the total explained health inequalities.

Methodology:

Decomposition Analysis

Progress: Manuscript preparation is under process.

8. Development of Data Hub of Health Surveys and Use of Information for modelling and projection of various diseases

Paper written and sent for publication in Demography India Journal.

Title of the paper is "TREND ANALYSIS OF MATERNAL AND CHILD CARE SERVICE INDICATORS IN LARGER STATES OF INDIA" by Dr. (Ms) Tulsi Adhikari & Prof. P. P. Talwar

9. National Non-communicable Disease Monitoring Survey (NNMS) in India.

Project Period: 2016-18
Project Funded by MoHFW, GOI.

The National Institute of Medical Statistics, New Delhi is one of the collaborative partner with National Center for Disease Informatics and Research, Bengaluru. The institute was involved right from the stage of development of protocol especially to develop sampling design and sample size. The survey design, field manual and selection of rural and urban PSUs as per the approved protocol was prepared by the Institute and after approval of sampling expert group committee, it was submitted to NCD Division of ICMR, New Delhi. The Scientist of Institute was also providing technical support to working team of Community Medicine Department of AIIMS headed by Prof. K. Anand, in developing survey Instrument for adult, adolescent and health facility survey. The data management tools and the open data kit (ODK) device and programming to capture the data directly from the field on electronic device was develop by National Institute of Epidemiology, Chennai with the support of NIMS and other partner Institutes including AIIMS.

The ten survey agencies has been identified for conducting the survey, they are mostly medical colleges covering the entire geographical region of country. The role of NIMS was to provide training to the trainers and field teams especially about the sampling methodology and field work. During the field work of survey team, the NIMS was in regular contact with all the survey team through NCDIR to provide technical support and answer any queries related to survey as and when needed through mobile and WhatsApp.

10. A study on gender inequity in health seeking behaviour among Santhal tribes of Jharkhand

Project Period: 2016-18
Project Funded by ICMR, New Delhi

Improving health services to tribal people is one of the priority areas of Government programme. The tribal people mainly depend upon the traditional health practices, the main reasons was possibly lack of awareness of the health facilities, least availability and accessibility of health facilities and hesitation to visit heath centers. The improvement of quality health services in government health sector and provision of health education to people would increase the utilization of government health services and thereby improve the health quality of the people. But this could be done if we understand the needs and gaps related to health seeking behavior of tribes of this region.

Objective:

Main Objective: To study gender inequity in treatment seeking behaviour among the Santhal tribes and utilization of health services.

Secondary Objective: To draw implication for intervention measures for improvement in health seeking behavior and gaps in utilization of health services.

The aim of the present study is to assess the health seeking behavior and understand the gender inequity among *Santhal* tribes of Jharkhand. It also intends to study the utilization of available health services in the study region (*Santhal Pargana*, Jharkhand). Health seeking behavior incorporates both the awareness to avail health facilities and the available health facilities.

C. Invited Talks/Lectures Delivered

Dr. Arvind Pandey

April 1, 2016	Lecture delivered In DHR/ICMR Workshop at GMCH and Workshop at PGI, Chandigarh
April 23, 2016	As a Resource Person and Chief Guest for the inaugural session of the workshop& to deliver a talk on "Clinical Research Design – Overview & to conduct expert session in the ICMR funded National Workshop " Clinical Research for Nurses" on Use of Statistics for nursing & physiotherapy facility at CHARUSAT University at Changa (near Ahmedabad) with partial funding support from ICMR.
May 5, 2016	Lecture delivered on "CTRI" in Bioethics Certificate Course 2016 in collaboration with Clinical Development Services Agency at Manipal University, Manipal.
August 3, 2016	Talk on 'Health Surveys in India' at National Health Systems Resource Centre (NHSRC), MOHFW, Govt. of India, NIHFW Campus, Munirka, New Delhi.
August 18, 2016	Attended the "SESSION ON INNOVATION IN TOBACCO HARM REDUCTION" at TAPTI, Hotel Shangri La.
October 6, 2016	Lecture on *Demographic and Health Surveys* in Training Course on 'Monitoring and Evaluation under NHM' to be held at National Institute of Health and Family Welfare (NIHFW), Munirka, New Delhi-110067**.**
November 19, 2016	Lecture in the workshop on "Innovation and Recent Trends in Bio-Mathematics & Statistics Education" at Banasthali Vidyapith, Banasthali University (Women's University), Rajasthan.
November 25, 2016	Meeting of the Data and Safety Monitoring Committee in rural Gadchiroli, Nagpur.
January 11-12, 2017	Lecture in the Bio-statistics Workshop on "Research Methodology" at Rajasthan University of Health Sciences (RUHS). (Presentation on Approaches for developing research plan- study design and methodology)

Dr. H.K.Chaturvedi

October 3-5, 2016	Probability distribution and Statistical test of Hypothesis *Attended 5th International Conference on Addiction Research and Therapy held at Atlanta, USA as a invited Speaker and delivered a talk on "Traditional use of opium and its impact on other neighboring community".*

Dr.Damodar Sahu

November 10, 2016	Invited to deliver lecture on "Concept of Population Dynamics, Demographic Dividend" at NSSTA , CSO in the training programme on "Demography & Population Studies" for state statistical officer organized by NASSTA, CSO, Govt. of India, Greater Noida.

January 30, 2017	Resource person for the Capacity Building workshop on OR, Ethics and Data Analysis in HIV/AIDS, Organized by NACO, WHO & CDC at Taj Mansingh, New Delhi during Jan 30- Feb 2, 2017.

Dr. Tulsi Adhikari	
January 5, 2017	Probability distributions and Statistical tests of hypothesis during the Winter Training workshop during 3-13 January 2017 for the M.Sc. (Statistics) students of Deptt. Of Statistics, Kurukshetra University.
January 9, 2017	Talk on Logistic Regression Analysis during the Winter Training workshop during 3-13 January 2017 for the M.Sc.(Statistics) students of Deptt. Of Statistics, Kurukshetra University.

Dr. Atul Juneja	
May 16-17, 2016	Delivered lectures on Sampling and smaple size at work shop on Research Methodology organized by DHR for MRUs at NIRTH Jabalpur
June 16, 2016	Delivered lectures on Design of studies to the students of Kurukshetra University , Amity University and BHU attending the summer training programme at NIMS
July 12, 2016	Delivered lecture on Sampling Methods at the workshop organized by NIPCCD New Delhi for the functionaries of voluntary organizations.
July 28, 2016	Delivered talks on Agreement Analysis and Pitfalls of Statistics during the workshop on Statistical Computing organized by ICPO (ICMR) NOIDA
September 3, 2016	Delivered lecture on approaches to Statistical Analysis for social scientists and faculty of Ch Ranbir Singh Institute of Social and Economic Change Rohtak
September 7, 2016	Delivered a lectures on Agreement Analysis during a workshop organized by Department of Dentistry Jamia Milia Islamia University, New Delhi
October 18, 2016	Invited for Review Committee Meeting of CCRAS under AYUSH as a SAG member
December 21, 2016	Delivered a talk statistical issues in Health Research during the workshop on E resources in Health Sciences-Role of ERMED consortium at National Medical Library, New Delhi.
January 4, 2017	Delivered lecture on Smapling Methods at the workshop organized by NIPCCD New Delhi for the functionaries of voluntary organizations.
January 5, 2017	Delivered lectures on Design of studies to the students of Kurukshetra University , attending the training programme at NIMS.
January 11-12, 2017	Delivered talks on Testing of Hypothesis during a workshop organized by Rajasthan University of Health Sciences Jaipur
February 20, 2017	Addressed the Korean Delegation on Research Methods in traditional Medicine during their visit to CCRAS New Delhi through Ministry of AYUSH and WHO

Dr. Jitenkumar Singh	
August 26-28, 2016	Three days' Workshop on Statistical Data Analysis using R software, organized by IHAT, Lucknow, Uttar Pradesh
October 22-23, 2016	1st Annual Workshop on Clinical Biostatistics under the theme of Sample size Estimation and Power Analysis with R. Organized by Himalayan

	Institute of Medical Statistics, Swami Rama Himalayan University, Dehradun, U.P.
January 23-24, 2017	Workshop on Biomedical Data Analysis using R. Organized by National Institute of Pathology, New Delhi

Dr. Lucky Singh	
November 8, 2016	Panelist for the seminar on "Roundtable: Inequality in Everyday Life" at India International Centre, New Delhi. The seminar was organized by International Social Science Council (ISSC) & Institute of Development Studies (IDS),
Mach 9-10, 2017	Invited Talk in the workshop entitled "Workshop on Biostatistics - an initiative to Educate the Educators". The workshop was organized by Botany Department in association with Department of Mathematics, Zakir Husain Delhi College (University of Delhi), Delhi.
March 31 – April 4, 2016	"Training Workshop: Statistical Methods in Biomedical Research and Data Analysis using Statistical Software (SPSS/R), organized by National Institute Of Medical Statistics (NIMS), ICMR, New Delhi.
June 1 - July 15, 2016	"Summer training programme" of M.Sc. (Statistics) students came from BHU, Varanasi; Kurukshetra University, Kurukshetra; B.B. Ambedkar University, Lucknow, Amity University, Noida, organized by National Institute of Medical Statistics (NIMS), ICMR, New Delhi.
January 3-13, 2017	"Winter Training Programme" of M.Sc. (Statistics) Students of Dept. of Statistics, Kurushetra University, organized by National Institute of Medical Statistics (NIMS), ICMR, New Delhi.

D. Scientific Meetings/Conferences/Workshop/Training attended

Dr. Arvind Pandey, Director (April 2016-January 2017)

Meeting of National Levels:

April 3, 2016	Screening Committee Meeting as a panel member of the selection-cum-search committee for the appointment of Vice chancellor of SBG Amravati University, Maharashtra.
April 8, 2016	Technical Advisory Group Meeting of Fortification of Mid-Day Meal at Bhubaneshwar (Odisha) at Hotel Mayfair Lagoon of State Project Management Unit(MDH), Deptt. of School & Mass Education, Govt. of Odhisha.
April 21, 2016	Screening Committee Meeting for selection of Vice Chancellor, SGB, Amravati University at Mumbai.
April 27, 2016	GBD Workshop Preparatory Meeting at Public Health Foundation of India, Gurgaon
April 29, 2016	The first meeting on GBD India Maternal and Child Health Expert Group at the PHFI Office in Gurgaon.
April 29, 2016	First Meeting of Strategic Advisory Group(SAG) for Evaluation and Learnings from India's Family Planning Investments at International Centre for Research on Women(ICRW), South Ext. New Delhi.
May 2, 2016	Meeting for selection of Vice Chancellor, SGB Amravati University at Mumbai.
May 3, 2016	Meeting to review the progress of the validation study on Causes of Death undertaken by NIMS held under the chairmanship of Addl. DG (Stats) in Nirman Bhavan, New Delhi.
May 10-11, 2016	National Consultation Meeting organized by WHO and MoHFW on Transitioning from MDGs to SDGs in India at Hotel Taj Palace, New Delhi.
June 14, 2016	Meeting to a briefing on the Global Nutrition Report 2016 organized by the Coalition for Food and Nutrition Security (CFNS) in collaboration with International Food Policy Research Institute (IFPRI) at India Habitat Centre, New Delhi
June 15, 2016	The 19th meeting of school research committee of University School of Medicine & Para Medical Health Sciences at GGSIP University, Sector, Dwarka, New Delhi.
June 16, 2016	Meeting of Letter of Intent (LOI) of the Centre for Global Health Research (CGHR-ICMR collaboration on mortality statistics with the ongoing activity on 'State level Disease Burden initiative' in collaboration with PHFI and also BOD study funded by MoHFW.
June 21, 2016	Census Workshop on FP2020 core indicators organizing by the Family Planning Division, MOHFW in collaboration with the Track20 Project, Avenir Health at India Habitate Centre, Lodhi Road, New Delhi.
June 25, 2016	Third Doctoral Committee Meeting of Ms. Sonam Bedi, Ph.D. Student of Deptt. of Biostatistics & Health Informatics at Sanjay Gandhi Postgraduate

	Institute of Medical Sciences, Lucknow .
June 27-29, 2016	To get first hand information/impression on surveillance and Verbal Autopsy procedures and filing up of forms in the field by the project staff (NIMR Project) at EMBI Field Work in District Kolhapur.
July 1, 2016	Joint Meeting of Technical Advisory Committee (TAC) and the Divisional Committee of Scientific Workers (DCSW) of Social Sciences Division(SSD) at HQ of the Institute at ISI, Kolkata
July 11, 2016	Observing World Population Day Event of Jansandkhya Sthirata Kosh in collaboration with MOHFW at Vigyan Bhawan.
July 12, 2016	Visit to Chatra- Ranchi for the field work of project Estimation of Malaria Burden in India (EMBI), which is collaborative project with NIMR to monitor the progress of the work.
July 21, 2016	Selection Committee Meeting for recruitment of Research Officer(Statistics) at Central Council for Research in Ayurvedic Sciences (CCRAS), Janak Puri, New Delhi.
July 21, 2016	Data sharing agreement between four parties – ORGI, ICMR, PHFI and IHME for the State-level Disease Burden Initiative at ORGI Conference Hall, R.K. Puram, New Delhi.
August 11, 2016	5th Meeting of the India Human Development Survey (IHDS)-II Advisory Panel at NCAER Conf. Room-A, IP Estate, New Delhi.
August 16, 2016	Informal Consultation Meeting on dengue disease burden estimation jointly organized by NVBDCP and WHO, under the Chairmanship Dr. Shiv Lal, former Spl DG, GoI in WHO Country Office at WHO Country Office for India, RKK, New Delhi.
August 18, 2016	Attended the "SESSION ON INNOVATION IN TOBACCO HARM REDUCTION" at TAPTI, Hotel Shangri La.
August 29-30, 2016	First Review Meeting of the project entitled "Estimate the burden of TB among the tribal population and develop an innovative health system model to strengthen TB control in the tribal areas" at Pondicherry Institute of Medical Sciences (PIMS), Pondicherry.
September 6, 2016	Meeting of the TAC of NFHS-4 to discuss Template for National Fact Sheet and Tabulation Plan for National Report in Committee Room No.249, A Wing, Nirman Bhawan, New Delhi.
September 23, 2016	Talk of Dr. Prem P. Talwar (Former Professor & Head of Department, Statistics and Demography, National Institute of Health & Family Welfare, MOHFW,GOI) on "Increasing Pace of Population Stabilization for Accelerating Poverty Alleviation" *at* Gauri Sadan, New Delhi-110001 *a*t Lokashraya Foundation.
September 27-29, 2016	Experts Consultation Meeting on HIV Surveillance and Estimation for successful consultation with concrete outcomes to make HIV surveillance and estimations further better at National AIDS Control Organisation(NACO), Department of AIDS Control (DAC), MOHFW, Chanderlok Building, Janpath, New Delhi.
October 1, 2016	Visited Dashauli, Uttar Pradesh (Lucknow) for Monitoring and Supervision work of the study entitled "National Estimation of blood requirement" at

	Integral Institute of Medical Science and Research.
November 24-25, 2016	Data Safety Monitoring Board (DSMB) Meeting at Nagpur.
December 5, 2016	1st Meeting of the National Core Group on Elimination of Mother to Child Transmission (EMTCT) of HIV/Syphillis in India at UNICEF India Office, Lodhi Estate, New Delhi.
December 7-19, 2016	37th Annual Conference of Indian Association for the Study of Population (IASP) on "Population and Sustainable Development" at IEG, Delhi University.
December 12, 2016	Technical Evaluation Committee (TEC) Meeting on Congenital malformation and genetics, Maternal Health, Child Health, Low Child Sex Ratio and other Gender and Health, Physical health problems to women " under the Grant-in-Aid Scheme for Inter-Sectoral Convergence & Coordination for Promotion and guidance on Health Research" at IRCS Building, Red Cross Road, New Delhi.
December 15, 2016	First Meeting to examine the feasibility of estimating Maternal Mortality Ratio for the year 2012-2014 at ORGI Conference Hall, Man Singh Road, New Delhi.
December 16, 2016	As an expert in the Selection Committee Meeting for selection of Assistant Professors in the Deptt. of Biostatistics and Health Informatics at Guest House of SGPGIMS, Lucknow.
December 20, 2016	Meeting of NFHS in Committee Room, Nirman Bhawan, New Delhi.
January 9, 2017	Discussion on Technical issues related to specification of HIV test kits under the chairmanship of Dr. K.S. Sachdeva, DDG at NACO at Chaderlok Building, 36, Janpath, New Delhi.
January 25, 2017	Second Meeting of the Expert group to examine the feasibility of estimating Maternal Mortality Ratio for the year 2012-14 at ORGI Conference Hall, Sector-1, R.K. Puram, New Delhi.
January 28, 2017	DSMB Meeting for Rabies G Protein Vaccine Phase-III Clinical Trial (CRSC15001) at Cadila Pharmaceutical Ltd., Ahmedabad.
January 31, 2017	Central Team Member (CTM) meeting at Conference Hall, National Documentation Centre (NDC), NIHFW.

- **International Expert Group Meetings:**

November 6-9, 2016	Participation in the UNAIDS Reference Group on Estimates, Modelling and Projections Fall Meeting at New York city, USA during November 7-8, 2016.

- **Meeting of ICMR & its Institutes**

April 25-27, 2016	Scientific Advisory Group Meeting, ECD Division, ICMR & Director's Meeting at ICMR, New Delhi.
June 21, 2016	A Public Lecture on International Yoga Day on "Yoga and Diabetes" by Dr SV Madhu, Professor and Head, Centre for Diabetes, Endocrinology and Metabolism, UCMS - GTB Hospital in ICMR Headquarters, New Delhi.
July 21, 2016	Selection Committee Meeting for recruitment of Research Officer(Statistics) at Central Council for Research in Ayurvedic Sciences (CCRAS), Janak Puri, New Delhi.
July 21, 2016	Data sharing agreement between four parties – ORGI, ICMR, PHFI and IHME for the State-level Disease Burden Initiative at R.G. Office.
July 25-27, 2016	Iauguration by Hon'ble HFM Sh. J P Nadda Ji to inaugural Session of DHR-ICMR-International Decision Support Initiative (iDSI) Collaborative Workshop on "Health Technology Assessment (HTA)- Stakeholders' Consultative Workshop" at India Habitat Center, New Delhi.
August 8-10, 2016	Workshop with Expert Group & Working Group to finalize the manuals and the guidelines for the proper implementation of the project at ICMR hqrs.
August 10, 2016	First Meeting of the ICMR Task Force on 'Comprehensive Health and Nutrition Survey' at "Centre for Promotion of Nutrition Research and Training" with special focus on North-East, Tribal and Inaccessible population (ICMR), ICMR Campus-II, Tuberculosis Association of India Building, Red Cross Road, Near Parliament, New Delhi.
August 23, 2016	The meeting of the Executive Council of the ICMR in the Conf. Hall, ICMR Hqrs.
August 26, 2016	An Expert Group Meeting regarding project entitled "Effect of air pollution on acute respiratory symptoms in Delhi : A multicentric study" , ICMR Hqrs., Ansari Nagar, New Delhi.
September 2, 2016	Key discussion points and the decisions taken during the VA study review meeting of COD project with Dr. Rajesh Narwal & NIMS Team at NIMS
September 1-3, 2016	Sept. 1: Inauguration of the India-Africa Health Sciences Meet at Vigyan Bhawan, New Delhi
September 2, 2016	Morning session of India-Africa Health Science Summit being chaired by Hon'ble MOS for Health & Family Welfare Ms. Anupriya Patel at Vigyan Bhawan, New Delhi.
October 6, 2016	Meeting on "Grant of Merit Based Promotion to Technical Staff – Implementation of Court Order" with Sr. DDG at ICMR.
November 4, 2016	Annual Day Celebration & Annual Day Oration at NIMR, New Delhi.

November 11, 2016	Merit Based Assessment Promotion Scheme (MBAPS) Meeting for Group B, C,D Technical Staff of ICMR. Member of the Assessment Committee.
November 18, 2016	LDCE Annual report/revised report to review the LDCE mentor committee meeting of ECD at ICMR.
November 23, 2016	Expert Group Meeting on "Multicentric study to assess health effects of pesticides on general population" at ICMR Hqrs. Under the chairmanship of Dr. P.K. Seth, Lucknow.
November 29, 2016	Expert Member of Selection Committee Meeting for promotion of Associate Professor to Professor in the Population Research Centre (PRC) of the Institute of Economic Growth(IEG), North Campus, New Delhi.
November 30, 2016	Technical Advisory Group (TAG) Comprehensive National Nutrition Survey (CNNS) members meeting to review the progress of CNNS under the Chairmanship of Joint Secretary.
January 9, 2017	Discussion on Technical issues related to specification of HIV test kits under the chairmanship of Dr. K.S. Sachdeva, DDG at Chaderlok Building, NACO, New Delhi.
January 23-25, 2017	Presentation in the ICMR 27th Meeting of the Indian Society for the Study in Reproduction and Fertility (ISSRF) 2017 "International Conference on Reproductive Health and Emphasis on the Strategies for Infertility, Assisted Reproduction and Family Planning" at AIIMS

Capacity building workshops on the application of statistical methods in biomedical research/Training Programme

i)   Inauguration of training to initiate the field studies of 'Estimation of Malaria Burden' project at NIMR (training is from April 7-9, 2016).

ii) Inauguration of Organization of Summer Joint NIMS-NIOH Training Programme on "Statistical Methods in Bio-medical Research" at NIOH, Ahmedabad, organized in May 11-14, 2016 .

iii) Winter Training Programme for the M.Sc. students of Statistics, Kurukshetra University (22 Students)

iv) Inauguration of Organization of Winter Joint NIMS-NIOH Training Programme on "Statistical Methods in Bio-medical Research" at NIOH, Ahmedabad on January 4, 2017.

Meeting convened at NIMS:

April 19, 2016	Review Meeting with the Chairman SAC at NIMS.
May 11, 2016	Inauguration of Organization of Joint NIMS-NIOH Training Programme on "Statistical Methods in Bio-medical Research" at NIOH, Ahmedabad.
September 2, 2016	Key discussion points and the decisions taken during the VA study review meeting of COD project with Dr. Rajesh Narwal & NIMS Team at NIMS
September 14, 2016	Lecture on Public Health of Dr. Anoop Sarya, Head, Gastrology, AIIMS on Hindi Diwas at NIMS.

September 14, 2016	Organised Hindi Divas Celebration at NIMS and invited Dr. Anoop Sarya, Head, Gastrology, AIIMS for Lecture on Public Healthat NIMS.
September 15, 2016	Prize Distribution for Hindi Day Celebration at NIMS. (Debate on: Prakaritak Chikatsa kay Labh aur Hanni)
October 7, 2016	Training: Implementing E-Office at NIMS, NIMR,NIP and NICPR in centralized manner a Training on e-Office of ICMR at NIMS Conference Hall (with Sr. DDG & all local Director's)
November 11, 2016	Merit Based Assessment Promotion Scheme (MBAPS) Meeting for Group B, C, D Technical Staff of ICMR.
November 23, 2016	Meeting of Child Mortality at NIMS.
November 26, 2016	Preparatory Meeting on Burden of Diseases (BOD) at NIMS.
December 20, 2016	Presentation on study on Comparing methods of assigning cause of death (COD) by verbal autopsy with DG, ICMR at ICMR.
December 20, 2016	Prof. PP Talwar Oration Meeting at the Institute to finalise the Orator for the year 2016
December 30, 2016	Technical Advisory Committee Meeting to have their technical inputs and further course of action of COD study at NIMS.
January 3, 2017	Inauguration of Training programme for the M.Sc. students of Statistics, Kurukshetra University.
January 4, 2017	Inauguration of Organization of Joint NIMS-NIOH Training Programme on "Statistical Methods in Bio-medical Research" at NIOH, Ahmedabad.
January 10, 2017	Performance Evaluation Committee Visit for 7th Pay Commission at NIMS.
January 16, 2017	Third Prof. PP Talwar Oration by Prof. N.K. Ganguly at ICMR Conference Hall.
January 18, 2017	Scientific Advisory Committee (SAC) Meeting of NIMS.
January 20, 2017	Ethics Committee Meeting of NIMS

Dr. D.K. Shukla, Director-In-charge

February 6, 2017	Meeting of the Assessment Promotion Committee for Merit Based Assessment Promotion Scheme (MBAPS) in ICMR Library.
February 7, 2017	Participation in Signing of MOU Ceremony of Indian Council of Medical Research and Monash University, Melbourne, Australia, who are entering into collaboration on Wolbachia based Aedes aegypti control strategy being signed by Dr. Soumya Swaminathan, DG, ICMR and Prof. Scott O'Neill, Director Eliminate Dengue Project, Monash, University, Melbourne at ICMR Hqrs., New Delhi.
February 8, 2017	Workshop on Protocol and Data Management Software Infrastructure at ICMR Hq. New Delhi.
February 9, 2017	Participation in the Salt Summit at Conference at India International Centre (IIC) New Delhi.
February 13, 2017	Meeting for Data Analysis work with Vivekanand Jha Executive Director, The George Institute for Global Health, India Professor of Nephrology and James Martin Fellow, University of Oxford at

	NIMS.
February 15, 2017	Meeting for the presentation/discussion of results of ''Estimation of Malaria Burden………in India' study, carried out during 2015-16 by NIMR, NIMS & NVBDCP at NIMR, Dwarka.
February 15, 2017	Meeting with Secretary, (HFM) MOHFW regarding the National Death Registry of India and the NCDIR e-Mor software. (Other members attendead the meeting are, Add. DG,ICMR,Dr. Prashant Mathur, Dr. Geeta Menon)
February 16, 2017	Screening Committee Meeting of the project entitled 'Gender enquity HS survey' at NIMS (Others Member: Dr. Chaturvedi, Ms. Poonam,Dr. Khan, AIIMS)
February 20, 2017	Orgnised a meeting to discuss review of proposals received under STS-Programme in the Conference Hall, NIMS. (The meeting will be taken by Dr. Ajit Kumar Mukherjee, Scientists 'F', NIMS)
February 17, 2017	20 th Meeting of the Management and Systems Division Council (MSDC) in Bureau of Indian Standard (BIS), New Delhi.
February 27, 2017	Organised E-Governance Training for its implementation in the NIMS. (The training will be provided by Shri B.S. Dhillon, Scientist 'F' alongwith five other experts from NIC & ICMR Hqrs. in the Conference Hall, NIMS.)
March 1, 2017	CTRI Project presentation in the Conference Hall, NIMS. Presentation will be made by Dr. Atul Juneja, Scientist 'D', NIMS & Dr. Mohua Maulik (Consultant).
March 2, 2017	Meeting of the Assessment Promotion Committee for Merit Based Assessment Promotion Scheme (MBAPS) at NIMS.
March 3-4, 2017	NIMS Workshop on "Economics Evaluation: Introduction concept & Applications" at NIMS
March 10, 2017	Government Analytics & Information Summit at Hotel Le Méridien, New Delhi.
March 14, 2017	Meeting with all Scientist on COD Project presentation by Dr. S.K. Benara at NIMS.
March 17, 2017	Meeting of Sub-committee of Monitoring, Evaluation and Surveillance on National Strategic Plan for NACO (as NACO is in the process of development of National Strategic Plan 2017-24 for Monitoring, Evaluation and Surveillance) at National AIDS Control Organisation (NACO), MOHFW, Chanderlok Building, New Delhi.
March 27, 2017	ICMR Annual Oration Recognizing Excellence in Health Research at the Jawaharlal Nehru Auditorium at AIIMS, New Delhi.
March 27, 2017	ICMR-SAMRC Meeting on Research Capacity Strengthening at ICMR Hqrs., New Delhi.

Dr.Ajit Mukherjee, Scientist F	
April 11-13, 2017	A training workshop on "Principles of Clinical Epidemiology and Bio-statistical Methods for Diagnostic Test", CMC, Vellore
September 24-25, 2017	Workshop on "Big Data in Population and Health: Perspective and Potential", organized by DST Centre for Policy and Research at IIT, New Delhi
November 6,	Workshop on Big Data Analytics in Government organized by National

2017	Institute of Smart Governance (NISG) at India Habitat centre, New Delhi

Dr.H.K.Chaturvedi, Scientist F	
December 1-3, 2016	Attended 34th Annual National Conference of "Indian Society for Medical Statistics" held at India Statistical Institute, Kolkata and presented a paper on "Analytical study of awareness and behavioral practices for prevention of malaria in the high endemic areas of Assam, India.
April 26, 2016	Third Expert Committee meeting for strengthening of quality control NIB, NOIDA
April 27, 2016	Meeting with Deputy Chief Army Col. To discuss the collaborative Plan of research with ICMR.
June 17, 2016	Suicide and Injuries working group meeting for analyzing injuries and suicide mortality from Million death study at PHFI, Gurgaon
July 8, 2016	Ph.D. Viva Voce Exam. At GGSIP University, Dwarka
July 21, 2016	Seminar/meeting on Addressing Non-communicable Disease Risk Factors among Young People: Asia's Window of Opportunity to curb a Growing Epidemic", Organized by Population Reference Bureau at Le Meridien Hotel, New Delhi
August 13, 2016	A review committee meeting of NIPCCD Research Proposal
August 17, 2016	TRG Meeting of EMB study organized by NVBDCP at NIMR, Dwarka, ND
September 1, 2016	India Africa Joint Conference on Health at Bigyan Bhawan, New Delhi
September 2, 2016	NCD Monitoring Survey, India at AIIMS, New Delhi
September 7, 2016	To deliver talk on Statistical methods in Health Research in ……NOIDA
September 17, 2016	To attend the meeting called by Dean USPMHS, IP University, New Delhi
September 23, 2016	To attend NCD Monitoring Survey Meeting at PGI, Chandigarh
October 3-5, 2016	5th International Conference on Addiction Research and Therapy 2016 held at Atlanta, Georgia, USA
4-6 January, 2017	Delivered talk on different topics in the 3 Day workshop on Statistical Methods in Biomedical Research organized by NIOH, Ahmadabad in collaboration with NIMS, New Delhi at NIOH, Ahmedabad.
February 3, 2017	PRG meeting of ICMR for review of project proposal on Cancer Screening
February 15, 2017	TAG meeting of Malaria Burden project at NIMR, New Delhi
February 15, 2017	Meeting to review progress of project "Estimation of Malaria Burden in India: A prospective national study to validate recently proposed methodologies of burden estimation in India".
February 21, 2017	Deliver a talk in the Workshop organized by Department of Statistics at Ram Lal Anand College, Delhi University
March 3-4, 2017	Workshop on Health Economics at NIMS, New Delhi

Dr.Anil Kumar, Scientist F	
April, 2016	Delivered lecture in training workshop: Statistical Methods in Biomedical Research and Data analysis using Statistical software (SPSS/R)

September 14, 2016	Attended Hindi Diwas at NIMS and acted as member Jury.
January 3-13, 2017	Delivered lecture in training workshop on "Data Management & Statistical Software" to M.Sc. students
February 8, 2017	Attended Workshop on Protocol and Data Management Software Infrastructure held at ICMR Headquarters, New Delhi.
February 27, 2017	Attended E-Governance meeting in NIMS, New Delhi
March 3-4, 2017	Attended workshop on Economic Evaluation: Introduction, Concepts and Applications at NIMS, New Delhi
March 27, 2017	Attended ICMR annual oration Recognizing Excellence in Health Research organized by ICMR.

Dr.Damodar Sahu, Scientist E	
April, 2016	Child mortality working Group Planning meeting at ICMR, New Delhi Organized by ICMR, New Delhi
May 6, 2016	National Consultation meeting for addressing Nutrition Challenges organized by ICMR at Conference Hall no. 301, New Delhi
August 8-10, 2016	Manual Development Workshop for Implementation and comparison of MIP Vaccine Immunoprophylaxis and Rifampicin chemoprophylaxis under the National Leprosy Eradication Programme(NLEP) in HIgh Endemic Settings organized by ICMR at ICMR Conference Hall, New Delhi.
September 1-3, 2016	Invited to participate India Africa Health Science Meet (IAHSM), at Vigyan Bhavan, New Delhi organized by ICMR, New Delhi
September 27-29, 2016	Expert Consultation Meeting on Surveillance & Estimations in India organized by NACO, MoHFW, Govt. of India supported by UNAIDS, WHO & CDC, India at Le Meridien, New Delhi.
October 5 2016	The meeting with Deputy Registrar General of India regarding collaborative work with ICMR at ICMR conference room, New Delhi
October 6, 2016	Member of the selection committee for the post of RO(Statistics) Non-medical in the HSS project at NIMS
October 7, 2016	Attand SRC meeting of university school of medicine & para-medical health sciences of GGS IP University, Dwarika, New Delhi
October 13, 2016	GBD meeting at NIMS
October 14, 2016	Participated a meeting related with "Vision for 15 years (2017-2030) of NIMS, New Delhi
October 18, 2016	HIV Consultation meeting under India State-level Disease Burden Initiative organized by ICMR, & PHFI at ICMR, New Delhi
September 23, 2016	Invitation to Participate in a Talk on "Increasing Pace of Population Stabilization for Accelerating Poverty Alleviation" by Prof. PP Talwar organized by Lokashraya, Delhi
November 7-12, 2016	Invited as a member of the expert panel in the subject: Population Studies (Code: 15) for confidential workshop organized by the Joint Secretary & In-charge (Academic & Training), CBSE, New Delhi at Sector-63, Noida, UP

November 28, 2016	Child Mortality Working Group Meeting as working group member at ICMR, New Delhi (ICMR-CGHR collaboration Study)
December 16, 2016	SRC meeting of university school of medicine & para-medical health sciences of GGS IP University, Dwarika, New Delhi
January, 18 2017	Meeting of the Scientific Advisory Committee (SAC) of the National Institute of Medical Statistics (NIMS)
January 16, 2017	The 3rd Prof. P.P. Talwar Oration delivered by Prof.N.K. Ganguly, Former DG, ICMR on "Value of Measurements in Health:Impact on Forecasting and Evaluation". Dr. Soumya Swaminathan, Secretary, DHR & DG, ICMR, will preside over the function organized by NIMS, ICMR, New Delhi.
January 31, 2017	As a Central team Member in HIV Sentinel Surveillance 2016-17 National Pre-Surveillance Meeting of Central Team Members at Conference Hall, NIHFW organized by NIHFW.
February 6-7, 2017	2nd National Core Group on Elimination of mother to child transmission of HIV and Syphilis in India, New Delhi organized by NACO and UNICEF, New Delhi
February 8, 2017	Workshop on Protocol and Data Management Software organized by ICMR, New Delhi
March 2, 2017	National dissemination workshop on HIV Allocative Efficiency Study, OPTIMA, at The Royal Plaza, New Delhi organized by NACO, World Bank and PHFI, New Delhi.
March 3-4, 2017	Workshop on "Economic Evaluation: Introduction, concept and application "at NIMS organized by NIMS
March 17, 2017	Stakeholders meeting for the development of National Strategic Plan 2017-24 for Monitoring, Evaluation and Surveillance organized by NACO at 9th Floor Committee Room, NACO, New Delhi
March 27, 2017	ICMR Annual Oration recognizing Excellence in Health Research by Dr Glenda Gray, President of the South African Medical Research Council (SAMRC) and Dr. Salim Abdool Karim, Director, Centre for the AIDS Program of Research in South Africa (CAPRISA) at the Jawaharlal Nehru Auditorium at AIIMS, New Delhi organized by ICMR, New Delhi.

Dr. Tulsi Adhikari, Scientist D	
June 21, 2016	Public lecture entitled "Yoga and Diabetes", by Dr.S.V.Madhu, Professor & Head, Centre for Diabetes, Endocrinology and Metabolism, UCMS - GTB Hospital, Delhi, ICMR Hqrs., New Delhi
January 10, 2017	Meeting of the Performance Evaluation Committee, NIMS, New Delhi
January 23-25, 2017	Arunachal field monitoring visit for Health Accounts Scheme
February 2, 2017	Meeting on e-governance, NIMS, New Delhi
February 8, 2017	Workshop on Protocol and Data Management Software at ICMR HQ, with representatives from Velos Inc., California USA and Aithent Technologies Pvt. Ltd, Gurgaon, Haryana, India
November 30, 2016	NAMS-NFI symposium on Nutrition and Health Transition in India: evidence from National Surveys, NAMS House, New Delhi

September 14, 2016	Lecture by Prof Anoop Saraya on the occasion of Hindi Divas at NIMS
January 16, 2017	Attended 3rd Prof PP Talwar oration by Prof NK Ganguly organized by NIMS New Delhi
March 1, 2017	Journal Club, NIMS, New Delhi
March 14, 2017	Journal Club, NIMS, New Delhi
March 3-4, 2017	Workshop on health economics at NIMS New Delhi
May 29-30, 2017	Workshop on Introduction to Systematic Reviews and Meta-Analysis
May 31, 2017	International Women's Health Day, meeting titled "Trends in nutrition outcomes, determinants and intervention coverage in India: Insights from the National Family Health Survey-4", at ICMR Hqrs, Conference Hall.

Dr. Atul Juneja, Scientist D	
April 7, 2016	Represented Director in a meeting to on discussion on paper on Global Burden of Myopia at ICMR Hq New Delhi.
May 3, 2016	Review meeting on the COD project under the chairma ship of ADG(Stat) MOHFW at Nirman Bhawan New Delhi
May 5, 2016	Meeting of DNB Committee at BL Kapoor Memorial Hospital New Delhi
May 18, 2016	Orientation workshop of project on Causes of Death (COD) at Maulana Azad Medical College, New Delhi.
June 1, 2016	Member of selection committee for the post of Consultant Medical and Consultant accounts for the project on COD
June 14-15, 2016	Visited Ranchi and field areas Simdega district to gain exposure to the field work WHO project on verbal autopsy and data management activities being carried out there.
July , 20116	DNB committee meeting at BL Kapoor Memorial hospital New Delhi as member
August 8, 2016	Working group meeting on MIP Vaccine –Project on leprosy.
September 1, 2016	Inaugural ceremony of Indo Afican Health meet organized by ICMR at Vigyan Bhawan. Presided by Hon Min of Health and FW Sh JP Nadda, Gen VK Singh, Mr Harshvardhan
September 14, 2016	Lecture by Prof Anoop Saraya on the occasion of Hindi Divas at NIMS
September 23, 2016	Internal Scrutiny Committee meeting as member at CCRAS, Min. of AYUSH
September 23, 2016	Lecture by Prof PP Talwar on Poverty Alleviation at Loksharya Foundation New Delhi
September 23, 2016	Represented Director at the meeting of the project on early detection of cervical breast and oral cancer –organised by Div of RHN ICMR New Delhi
October 5, 2016	Represented Director at the meeting of Young Diabetes Registry at ICMR
October 18, 2016	Review Committee meeting of CCRAS as member of SAG. Chaired by Dr VM Katoch.
October 20, 2016	Meeting of the expert group of Global Burden of Disease –cancer at ICMR. Meeting steered by Prof Christopher Murray.
November 23, 2016	Meeting of Multicentric project on Role of Pesticides on Health at ICMR.
December 1-3, 2016	Presented a paper on burden of cancer during Annual Conference of ISMS held at ISI Kolkata and also chaired a session.
December 27,	DNB Committee meeting at BL Kapoor Memorial Hospital New Delhi

2016	
January 16, 2017	Attended 3rd Prof PP Talwar oration by Prof NK Ganguly organized by NIMS New Delhi
March 3-4, 2017	Workshop on health economics at NIMS New Delhi

Dr. Saritha Nair, Scientist D	
Apr 27-28, 2016	International Conference on Betel Quid and Areca Nut, Kuala Lumpur, Malaysia
May 6, 2016	Meeting on nutrition at ICMR HQ
August 10, 2016	Anemia working group, on 10 August at ICMR HQ
August 18, 2016	The vaping revolution: How bottom-up innovation is saving lives and prospects for India, Hotel, Shangri La
October 19, 2016	Global Burden of Disease estimates on MCH at ICMR HQ
November 30, 2016	NAMS-NFI symposium on Nutrition and Health Transition in India: evidence from National Surveys, NAMS House, New Delhi
February 7, 2017	2nd Meeting of National Core Group on Elimination of Mother to Child Transmission (EMTCT) of HIV & Syphilis in India at Taj Vivanta, New Delhi.
February 28, 2017	Meeting on Gender Equality and Empowerment Measures, Bill and Melinda Gates Foundation office, New Delhi
March 3-4, 2017	Workshop on Economic Evaluation: Introduction, concepts and applications

Dr. B.K.Gulati, Scientist C	
May 3, 2016	Meeting to review the progress of the study entitled "Comparing Methods of Assigning Causes of Death", MOHFW, Nirman Bhavan, New Delhi
May 18, 2016	Orientation Workshop on "Comparing Methods of Assigning Causes of Death", MAMC, New Delhi
June 21, 2016	Public lecture entitled "Yoga and Diabetes", by Dr.S.V.Madhu, Professor & Head, Centre for Diabetes, Endocrinology and Metabolism, UCMS - GTB Hospital, Delhi, ICMR Hqrs., New Delhi
September 1, 2016	Inaugural function of the India-Africa Health Sciences Meet, Vigyan Bhawan, New Delhi,
September 23-25, 2016	Presented paper on "Epidemiological Transition in Urban Bihar: An Analysis of MCCD Data" in the 14th Annual Conference of the Indian Association for Social Sciences and Health (IASSH) on "Health, Gender and Development: Emerging Issues and Challenges", Gokhale Institute of Politics and Economics, Pune
October 20-22, 2016	Workshop on "Statistical Data analysis using R Software", Department of Biostatistics, NIMHANS, Bangalore
December 20, 2016	Progress review meeting of the study entitled "Comparing Methods of Assigning Causes of Death", DG's Office, ICMR, New Delhi
December 30, 2016	Meeting of the Technical Advisory Committee of the study entitled "Comparing Methods of Assigning Causes of Death", NIMS, New Delhi
January 10, 2017	Meeting of the Performance Evaluation Committee, NIMS, New Delhi
January 16, 2017	3rd Prof.P.P.Talwar Oration by Prof.N.K.Ganguly on "Value of Measurements in Health: Impact on Forecasting and Evaluation", ICMR

	Hqrs., New Delhi
January 18, 2017	Meeting of the Scientific Advisory Committee of National Institute of Medical Statistics, NIMS, New Delhi
February 2, 2017	Meeting on e-governance, NIMS, New Delhi
February 6-9, 2017	Visited Gwalior regarding initiation of survey work of the project entitled 'Improvement in the Utilization of RCH Services through Male Participation among the Saharia Tribes in Gwalior District, Madhya Pradesh'
March 3-4, 2017	Workshop on "Economic Evaluation: Introduction, Concepts & Applications", NIMS, New Delhi
March 22, 2017	Progress review meeting of the study entitled "Comparing Methods of Assigning Causes of Death", NIMS, New Delhi
March 27, 2017	ICMR Annual Oration recognizing excellence in health research – "HIV vaccines: Progress made to advance candidates to efficacy studies" by Dr.Glenda Gray, President, South African Medical Research Council (SAMRC) and "HIV prevention in Africa: Challenges and prospects" by Dr.Salim Abdool Karim, Director, Centre for the AIDS Program of Research in South Africa (CAPRISA), AIIMS, New Delhi

Dr. Kh.Jitenkumar Singh, Scientist C	
January 16, 2017	3rd Talwar Orentation organized by NIMS, ICMR Hqrs.
January 18, 2017	SAC meeting , NIMS, Conference Hall
January 23-25, 2017	International Conference on Reproductive Health with Emphasis on Strategies for Infertility, Assisted Reproduction and Family Planning organized by ICMR at AIIMS Auditorium Hal
January 24-25, 2017	NIOP R workshop, New Delhi
February 8, 2017	Workshop on Protocol and Data management Software organized by Velos Inc, Fremont California, USA and Aithent Technologies Pvt. Ltd., Gurgaon, Haryana, ICMR Hqrs.
February 16-17, 2017	Training Workshop on Mobile Application development and data management regarding NCD-Monitoring Survey- India 2015-16, NIE Chennai
February 20, 2017	ICMR Task Force on Child hood and Adolescent Anaemia Setting the Agenda for Future Research, ICMR conf. Hall
February 27, 2017	eOffice Training, NIMS conference Hall
March 1, 2017	Review of CTRI Project Presentation, NIMS conference Hall
March 3-4, 2017	Workshop on Health Economics, Economic Evaluation: Introduction, Concepts and Applications
March 10, 2017	GGSIP University 12th Convocation Ph.D.
March 21-24, 2017	Grand Challenges India Meeting 2017 organized by BIRAC, Ashok Hotel, B-50, Diplomatic Enclave, New Delhi
March 27, 2017	Indian Council of Medical Research Annual Oration Recognizing Excellence in Health Research, organized by ICMR
Dr. Lucky Singh, Scientist C	
May 3, 2016	Presented paper entitled "Under five Mortality in India: Levels, Trends and

	Causes" at "GBD Technical Training Workshop" at Negroponte Resort, Greece hosted by Institute for Health Metrics and Evaluation (IHME).
January 23-25, 2017	Presented paper entitled "Maternal nutrition: effects on survival on the next generation" in the International Conference on Reproductive Health with Emphasis on Infertility, Assisted Reproduction and Family Planning, at AIIMS, New Delhi.
May 3-13, 2016	Attended the "GBD Technical Training Workshop", at Negroponte Resort, Greece hosted by Institute for Health Metrics and Evaluation (IHME), USA.
February 8, 2017	Attended Workshop on Protocol and Data Management Software Infrastructure with representatives from Velos Inc., of Fremont, California, USA and Aithent Technologies Pvt. Ltd, Gurgaon at ICMR Headquarters, New Delhi.
March 3-4, 2017	Attended workshop on "Economic Evaluation: Introduction, Concepts, & Applications". Organized by National Institute of Medical Statistics (NIMS), ICMR.
May 24, 2016	Attended the Meeting of "Coordination Committee for SRS Data Utilization by State-level Disease Burden Initiative" at ICMR, New Delhi.
June 17, 2016	Attended the meeting of "Suicide and Injuries Working group" for analyzing injuries and suicide mortality from Million Death Study at PHFI, New Delhi.
September 1-3, 2016	Attended "India-Africa Health Sciences Meet" at the Vigyan Bhavan, Maulana Azad Road, New Delhi was organized by the Indian Council of Medical Research (ICMR) and the Ministry of External Affairs, Government of India.
September 5-9, 2016	Attended GBD India Expert Group meetings at PHFI.
October 2016	Attended GBD India Expert Group meetings at PHFI.
October 5, 2016	Attended the meeting with Mr. Rohit Bhardwaj, Deputy "RGI on RGI activities and the kind of collaboration RGI expects with ICMR" at ICMR.
November 28, 2016	Attended "Child mortality working group meeting" at ICMR.
November 28, 2016	Attended Burden of Disease (BOD) seminar at NIMS, New Delhi in which ICMR scientists were trained by Centre for Global Health Research (CGHR) in WHO-BOD tools.
November 30, 2016	Attended NAMS - NFI SYMPOSIUM ON Nutrition & health transition in India: evidence from national surveys at Kamla Raheja Auditorium, NAMS House, New Delhi.
January 16, 2017	Attended the 3rd Prof. P.P. Talwar Oration at ICMR on "Value of Measurements in Health: Impact on Forecasting and Evaluation".
March 23, 2017	Attended "Grand Challenges India Meeting" at The Ashok Hotel, B-50, Diplomatic Enclave, Chanakyapuri, New Delhi, India.
Dr. Jitender Yadav, Technical Officer	
September 23-25, 2016	Presented paper entitled "Prevalence and Correlates of Maternal Anemia in India: Analysis of a Nationally Representative Cross-Sectional Survey, 2012-13" At the "14th Annual Conference of the Indian Association for Social Sciences and Health (IASSH) on Health, Gender and Development: Emerging Issues and Challenges held at the Gokhale Institute of Politics and Economics, Pune Maharashtra.
December 7-9, 2016	Presented paper entitled "Urban-Rural Disparities in Comprehensive Knowledge of HIV/AIDS Among Reproductive Age Women (15-49 Years)

	in India: Spatial Analysis" At the XXXVII Annual Conference of Indian Association for the Study of Population (IASP) on "Population and Sustainable Development" Organized by Institute of Economic Growth, Delhi University, Delhi.
January 23-25, 2017	Presented paper entitled "Rural-urban disparities in prevalence of anemia among adolescent girls in India." At the International Conference on Reproductive Health with Emphasis on Infertility, Assisted Reproduction and Family Planning at AIIMS, New Delhi,

E. Ph.D. Meeting of Ph.D. Students & Guide/Co-guide/Doctoral Committee Member

Dr. Arvind Pandey

April 13, 2016	M.Phil/Ph.D. Viva voce examination of Ms. Debashrita Chatterjee on his thesis entitled "Child Survival Strategies among Urban Slum Dwellers in Delhi" at Jawaharlal Nehru University (JNU) in the Committee Room of CSRD/SSS-III.
April 20, 2016	Ph.D. Viva Voce examination at IIPS, Mumbai.
April 29, 2016	Ph.D. Viva-Voce Examination of Mr. Narendra K. Tiwari (Community Medicine) at BHU.
May 24, 2016	Ph.D. Viva Voce of Dr. Nomita Chandiok in r/o her thesis entitled "Breast Feeding and Child Survival in India", GGSIP University, Dwarka, New Delhi.
June 25, 2016	Third Doctoral Committee Meeting of Ms. Sonam Bedi, Ph.D. Student of Deptt. of Biostatistics & Health Informatics at Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow .
July 29, 2016	Viva- voce Examination of Sri K.P. Nelavagi at Dharwad University, Dharwad.
September 24, 2016	Visit to Vikram University, Ujjain for Ph.D. viva voce of Mr. Mazoor Ahmed Khandey in Statistics.

Dr. H.K.Chaturvedi

August 16, 2016	Kh. Jitenkumar Singh, Ph.D. Research Scholar submitted his thesis on "Spatial and Multilevel modeling to study the utilization of reproductive and health services in empowered action group(EAC) States of India" and got awarded Ph.D. Degree in Medical Statistics by GGSIP University, New Delhi

Dr.Damodar Sahu

Dec. 16, 2016	Presentation Ph.D progress report of Gunjika Mishra, Ph.D. Scholar, 2013 batch at GGS IP University, Dwarka, New Delhi
Dec. 16, 2016	Presentation Ph.D proposal of Sanjeev kumar Singh Ph.D Scholar 2015 batch at GGS IP University, Dwarka, New Delhi

F. Publications

1) Ashwini Kedar, Sanjay Gupta1 and Kh. Jitenkumar Singh (2017). Tobacco use and its determinants among 13-15 year old adolescents of two central government schools of New Delhi district, International Journal of Community Medicine and Public Health, 2017 Jun;4(6):1912-1917

2) Atul Juneja, Abha R. Aggarwal, Tulsi Adhikari, Arvind Pandey. Testing of Hypothesis in Equivalence and Non Inferiority Trials-A Concept, J Clin Diagn Res. 2016 Apr; 10(4): LG01–LG03

3) Balaiah Donta, Saritha Nair, Niranjan Saggurti, Mohan Ghule, Madhusudana Battala, Anindita Dasgupta, Velhal Gajanan, Jay Silverman, Anita Raj. The Importance of Husbands' Engagement in Family Planning Discussion to Promote Contraception Use for Birth Spacing in Rural India. Asia-Pacific Population Journal Vol. 31, No. 2, December 2016

4) B.K. Gulati, Arvind Pandey (2016) Epidemiologic Transition in Urban India: An Analysis of Medical Certification of Cause of Death Data, Int. Journal of Health Sciences and Research, www.ijhsr.org ISSN: 2249-9571.

5) B.K.Gulati, Pandey A. (2017). Changing pattern of causes of death statistics in urban population of Rajasthan: An analysis of MCCD data. International Journal of Applied Research January, Vol. 3, Issue 1; 516-522.

6) B.K.Gulati, Pandey A. (2017). Epidemiological transition in view of changes in the pattern of causes of death and age structure of mortality in urban population of Bihar. IER Journal of Health and Demography January, Vol. 2, Issue 2; 30-41.

7) Bal Kishan Gulati, Sahu D, Shukla AK, Pandey A. (2012-14). Health inequalities in infant and under-five mortality in India. Janasamkhya, Vol. 30 & 32, 31-39 (Published in April, 2016).

8) Bhatnagar T, Dutta T, Stover J, Godbole S, Sahu D, Boopathi K, et al. (2016) Fitting HIV Prevalence 1981 Onwards or Three Indian States Using the Goals Model and the Estimation and Projection Package. PLoS ONE 11(10): 0164001.doi:10.1371/journal.pone.0164001

9) Bajpai Ram C, Chaturvedi HK, Bhatnagar N and Jha UM.(2016).Correlates of change of CD4 count among the HIV patients at antiretroviral treatment centres in India: Cross sectional Analysis of secondary data. National Journal of Community Medicine,7(2):71-77.

10) Bajpai Ram C, Chaturvedi HK, Kumar Sarvesh, Pandey A.(2016).Estimation of lifetime survival and predictors of mortality among the people living with HIV/AIDS:A case study in Andhra Pradesh, India.International Journal of Community Medicine and Public Health,3(4):845-851.

11) Bajpai Ram C., Chaturvedi HK, Jayaseelan L, Seguy N., Chavan L., Raj P. and Pandey A (2016).Effects of antiretroviral therapy on the survival of HIV positive adult patients in Andhra Pradesh India:A Retrospective Cohort study,2007-2013.Journal of preventive Medicine and Public Health,49(6).

12) Chandan Kumar, Prashant Kumar Singh, Lucky Singh & Rajesh Kumar Rai (2016). Socioeconomic disparities in coverage of full immunisation among children of adolescent mothers in India, 1990–2006: A repeated cross-sectional analysis. BMJ Open, 6(8):e009768. DOI: 10.1136/bmjopen-2015-009768. PMID: 27519918.

13) Chaturvedi HK, Bajpai Ram C and Pandey A. (2016).Predictors of substance use in the tribal population of Northeast India: Retrospective analysis of cross-sectional survey. J Addict Res Ther, 7:295.

14) Chaturvedi HK, Bajpai Ram C and Pandey A. (2016). Correlates and Gender Differentials of Opium Use among Tribal Communities. Neuropathology of Drug Addiction and Substance Misuse, Vol. 2, Edited by Victor R. Preedy, Elsevier Publication,2016:1036-45.

15) D Naik, Balaiah Donta, Saritha Nair and BN Mali. 2016. Enhancing awareness of STIs and Cervical Cancer among women in an urban slum of Mumbai: A comparative study focusing on General, OBC and SC/ST population Asian Journal of Multidisciplinary Studies, 4(10) September, 2016. ISSN: 2321-8819 (Online) 2348-7186 (Print).

16) D. Naik, Balaiah Donta, Saritha Nair, B. N. Mali. Awareness of sexually transmitted infections and

cervical cancer among women in urban slums of Mumbai, Maharashtra, India. International Journal of Community Medicine and Public Health. 2017 Feb;4(2):400-404. DOI: 10.18203/2394-6040.ijcmph20170262

17) D. Sahu, Niranjan Saggurti, R.M Mishra, Deepika Ganju, Laxmikant Chavan, Arvind Pandey (2016) Contribution of a large-scale HIV prevention Program on condom use by long-distance truck Drivers in India: A decomposition analysis, National Journal of Community Medicine, 2016; 7(7):627-633, pISSN 0976 3325│eISSN 2229 6816, www.njcmindia.org.

18) De, P., Sahu, D., Pandey, A., Gulati, B.K., Chandhiok, N., Shukla, A.K., Mohan, P. and Mitra, R.G.(2016). Post Millennium Development Goals Prospect on Child Mortality in India: An Analysis Using Autoregressive Integrated Moving Averages (ARIMA) Model. Health, 8, 1845-1872. http://dx.doi.org/10.4236/health.2016.815176

19) Elizabeth Reed,Niranjan Saggurti, Balaiah Donta,Julie Ritter,Anindita Dasgupta,Mohan Ghule, Madhusudana Battala, Saritha Nair, Jay G. Silverman, Arun Jadhav, Prajakta Palaye, Anita Raj. Intimate partner violence among married couples in India and contraceptive use reported by women but not husbands.International Journal of Gynecology & Obstetrics, Volume 133, Issue 1, April 2016, Pages 22–25

20) Jay G. Silverman, Donta Balaiah , Julie Ritter1 , Anindita Dasgupta , Sabrina C. Boyce , Michele R. Decker , D. D. Naik , Saritha Nair , Niranjan Saggurti and Anita Raj. Maternal morbidity associated with violence and maltreatment from husbands and in-laws: findings from Indian slum communities. Reproductive Health (2016) 13:109 DOI 10.1186/s12978-016-0223-z.

21) Jeetender Yadav, Ashish Kumar Yadav, Garima Sharma, Jitenkumar Singh (2016). A population-based study on correlates of abortion in India (1990-2006), Int J Reprod Contracept Obstet Gynecol. 2016 Jun;5(6):1757-1764.

22) Jeetendra Yadav, Ashish Kumarr Yadav, Subhash Gautam and Kh Jitenkumar Singh (2017). Trends and Determinants of Infant Mortality in Empowered Action Group States, India (1990-2006). IOSR Journal Of Humanities And Social Science (IOSR-JHSS). Volume 22, Issue 1, Ver. 3 (January 2017) PP 107-121. e-ISSN: 2279-0837, p-ISSN: 2279-0845.

23) Jeetendra Yadav, Ashish Kumarr Yadav, Umenthala Srikanth Reddy and Kh Jitenkumar Singh (2017). Socioeconomic and Regional Disparities in Under-Five Mortality in India, Indian Journal of Public Health Research & Development, 2017, June.

24) Jeetendra Yadav, Jitenkumar, Subhash Gautam, Ram Janak Yadav (2016). Differential in Utilization of Maternal Care Services in Empowered Action Group States, India (1990-2006). Indian Journal of Community Health, Vol.28. Issue No. 01. Jan – March 2016.

25) Jeetendra Yadav, Kh. Jitenkumar Singh and Subhash Gautam (2016): Correlates of substance use in Northeast States, India. International Journal of Community Medicine and Public Health, June 2016, Vol 3, Issue 6 Page 1539.

26) Jeetendra Yadav, Shyama Gupta and Kh. Jitenkumar Singh (2016). Socioeconomic and regional disparities in safe delivery in India (1990-2006), International Journal of Community Medicine and Public Health, September 2016, Vol 3(9), Issue 6 Page 1539.

27) Jeetendra Yadav, Subhash Gautam and Kh. Jitenkumar Singh (2017). Prevalence and Correlates of Alcohol Consumption in Northeast states, India (Evidence from District Levels Household Survey - 2012-13)". International Journal of Community Medicine and Public Health. January 2017, Vol (4), Issue(1).

28) Jyotsna Suri, J C Suri, Bidisha Chatterjee, Pratima Mittal, Tulsi Adhikari. Obesity may be the common pathway for sleep-disordered breathing in women with polycystic ovary syndrome, Sleep Medicine, 24 (2016). pp 32-39

29) Himanshu K. Chaturvedi, Ram C. Bajpai & Preeti Tiwari (2017): Association of religion and cultural tradition with alcohol use among some tribal communities of Arunachal Pradesh, India. Journal of Ethnicity in Substance Abuse, DOI: 10.1080/15332640.2017.1 355766

30) Kh Jitenkumar Singh & Neeru Singh (2016). Age Adjusted Prevalence of Tobacco and Alcohol

Consumption Among Male and Female in Northeast States, India. Asian Academic Research Journal of Social Science and Humanities, Vol(3), Issue 6, June, 2016.

31) Kh Jitenkumar Singh & Neeru Singh (2016). Smokeless Tobacco use among Male and Female in Northeast State, India, Global Journal of Medical Research: K Interdisciplinary. Vol(16), Issue 3 Version 1.0, 2016.

32) Kh Jitenkumar Singh, Kanika Grover (2016). Factors Influencing Maternal Health Care Services Utilization in Northeast States, India: A Multilevel analysis, American International Journal of Research in Humanities, Arts and Social Sciences, 15(1), June-August, 2016, pp. 63-69.

33) Kh Jitenkumar Singh, Neeru Singh (2016). Geographical Variation on Smokeless Tobacco Consumption among Male and Female in Northeast States, India. International Journal of Humanities and Social Science Invention. Vol.(5) Issue 7, pp. 36-42, July. 2016.

34) Kh. Jitenkumar Singh and Kanika Gover (2016). Factors affecting maternal health care seeking behaviour in Northeast states, India: Evidence from District Level Household Survey-4, International Journal of Research in Medical Sciences, November 2016, Vol 4(11):4949-4956.

35) Kh. Jitenkumar Singh and Mani Deep Govindu (2017). Prevalence of Exclusive Breastfeeding Practices and Its Associated Factors in Maharashtra: A Spatial and Multivariate Analysis. Asian Pacific Journal of Health Science, 2017; 4(1):145-151. e-ISSN: 2349-0659, p-ISSN: 2350-0964.

36) N.A. Siddiqui1, Vidya N. Rabidas, SK Sinha, R.B. Verma, Krishna Pandey, V.P. Singh, Alok Ranjan, R.K. Topno, C.S. Lal, Vijay Kumar, G.C. Sahoo, S. Sridhar, Arvind Pandey, Pradeep Das (2016): Snowball Vs. House-to-House Technique for Measuring Annual Incidence of Kala-azar in the Higher Endemic Blocks of Bihar, India: A Comparison, PLoS Neglected Tropical Diseases 10(9): e0004970.doi:10.1371/journal.pntd.0004970.

37) NCD Risk Factor Collaboration, Chaturvedi HK (2016).Trends in adult body-mass index in 200 countries from 1975to 2014: a pooled analysis of 1698 population based measurement studies with 19.2 million participants. The Lancet,387: 1377-96

38) NCD Risk Factor Collaboration, Chaturvedi HK (2016).A century of trends in adult human height. Doi:10.7554/eLife.13410.0 01

39) NCD Risk Factor Collaboration, Chaturvedi HK.(2017).Worldwide trends in blood pressure from 1975 to 2015: a pooled analysis of 1479 population-based measurement studies with 19.1 million participants Lancet: The Lancet, 389(10064): 37-55.

40) Nomita Chandhoik, D. Sahu, B.K. Gulati, A.K. Shukla & Arvind Pandey (2016) Estimates of Infant and Child Mortality in India: A Comparison between SRS and NFHS, In S. Sharma (Ed.) Demographic Challenges in India, Athena Academic, info@athnaacademic.com, London, UK, pp. 135-160.

41) Partha De, D. Sahu, Arvind Pandey, B.K. Gulati, Nomita Chandhiok, Arvind Kumar Shukla, Pavitra Mohan, RG Mitra (2016) Post millennium development goals prospect on child mortality in India: An analysis using autoregressive integrated moving averages model Health, 2016, 8, 1845-1872, http://www.scirp.org/journal/health, Online: 1949-5005, ISSN Print: 1949-4998.

42) Priyanka Gupta Bansa, Gurudayal Singh Toteja,…. ,Tulsi Adhikari, Ashok Kumar Garg. Comparison of haemoglobin estimates using direct and indirect cyanmethemoglobin methods, communicated to Indian Journal of Medical Researc. 2016 (144) 4 | Page : 566-571

43) Raj A, Ghule M, Ritter J, Battala M, Gajanan V, Nair S, Dasgupta A, Silverman J G, Balaiah D, Saggurti N . Cluster Randomized Controlled Trial Evaluation of a Gender Equity and Family Planning Intervention for Married Men and Couples in Rural India. PLoS ONE 2016. 11(5): e0153190.doi:10.1371/journal.pone.0153190

44) Rajesh Kumar Rai, Lucky Singh & Prashant Kumar Singh (2017). Is maternal body mass index associated with neonatal mortality? A pooled analysis of nationally representative data from nine Asian countries.Nutrition, DOI: 10.1016/j.nut.2017.04.002.

45) Reed E, Donta B, Dasgupta A, Ghule M, Battala M, Nair S, Silverman J, Jadhav A, Palaye P, Saggurti N, Raj A. Access to Money and Relation to Women's Use of Family Planning Methods Among Young Married Women in Rural India. Matern Child Health J. Matern Child Health J. 2016 Jun;20(6):1203-

10. doi: 10.1007/s10995-016-1921-4

46) Sahu, D., Dutta, T., Kumar, S., Mishra, N.R., Neogi, S., Mondal, S., Dadhwal-Singh, A. and Levitt-Dayal, M.(2016) Effects of Women's Autonomy and Male Involvement on Reproductive and Child Health (RCH) Service Utilization in Uttar Pradesh. Open Journal of Preventive Medicine , 6, 260-271. http://dx.doi.org/10.4236/ojpm.2016.611024

47) Shankar, H., Kumar, N., Sandhir, R. Mittal S, Adhikari T. et al. Micronutrients Drift During Daily and Weekly Iron Supplementation in Non-anaemic and Anaemic Pregnancy. Ind J Clin Biochem (2017). doi:10.1007/s12291-017-0634-9.

48) Shashi Sharma, Atul Juneja, Tulsi Adhikari, Apporva Anand. Significance of correction of p value in statistical comparisons Among multiple groups in biological research, Euopean J of Biomedical and Pharmaceutical Sciences. 3(1) 2016. pp 400-401

49) Tarun Bhatnagar, Tapati Dutta, John Stover, Sheela Godbole, D. Sahu, K. Boopathi, Shilpa Bembalkar, Kh. Jitenkumar Singh, Rajat Goyal, Arvind Pandey, Sanjay M. Mehendale (2016) Fitting HIV prevalence 1981 onwards for three Indian states using the Goals Model and the estimation and projection package, PLoS ONE DOI:10.1371/journal.pone.0164001 October 6, 2016, pp. 1-12.

50) Tulsi Adhikari, Arvind Pandey, Jiten Kh Singh, Atul Juneja. Multi-Level Modelling Approach in Analyzing the Association between Utilization of Antenatal Care Services and Explanatory Variables. Aryabhatta Journal of Mathematics & Informatics. 2016 July-Dec; 8(2): 199-203.

51) Tulsi Adhikari, D. Sahu, S Nair, KB Saha, RK Sharma & Arvind Pandey (2016) Factors associated with utilization of antenatal care services among tribal women: a study of selected states, Indian Journal of Medical Research 144, July 2016, pp. 58-66. DOI: 10.4103/0971-5916.193284.

52) Tulsi Adhikari, Kh. Jitenkumar Singh, Atul Juneja and Arvind Pandey (2016) Multi-level Modelling Approach to Analyse Child Health Care Services, Utilization and its Correlates, Statistics and Applications {ISSN 2452-7395, http://ssca.org.in/journalvolumes/1/}, Vol. 14 (No. 1&2), 2016 (New Series), pp 159-169.

53) Agrawal A, Munivenkatappa A, Shukla D, **Menon G**, Alogolu R, Galwankar S et al. Traumatic brain injury related research in India: An overview of published literature. International Journal of Critical Illness and Injury Science. 2016;6(2):65.

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55) Manisha Gupta, **Geetha Menon**, Surekha Garimella, Shreya Jha The effects of transport infrastructure and logistics interventions on women's participation in formal labour markets in low- and middle-income countries: a systematic review. Registered at Campbell Collaboration. February 7, 2017.

56) Nityananda Mandal, Parveen Kumar Anand, **Subhash Gautam**, Shritam Das & Tahziba Hussain. Diagnosis and treatment of Paediatric tuberculosis: An insight review. Journal Critical Reviews in Microbiology Volume 43, 2017 - issue 4; page:466-480.

G. Training/Workshops Organized

Date	Workshop Details
May 25, 2017	Brain Storming meeting on "Big Data Analytics" in collaboration with Division of ISRM, ICMR, New Delhi with 21 participants Objective of the meetingwas to explore the utility of exploiting large data sets of ICMR such as NNMB surveys data and few others that could be used under the ambit of Big Data. Meeting was chaired by Dr. Soumya Swaminathan, Secretary, DHR & DG, ICMR. Dr.Tartakovsky Mike and Dr. Maria Giovanni, NIH were international participants who joined the meeting through video conferencing. The following action-oriented recommendations were made at the end:- (i) A project should be initiated on priority basis to demonstrate utility of Big Data Analytics in the area of Dengue-surveillance. (**Action: Dr. Manoj Murhekar, ICMR-NIE**) (ii) Formation of a proposal on Big Data Analytics in the area of Nutrition (**Action: Head, Nutrition, ICMR; Director, ICMR-NIN and IIPH, Hyderabad**) (iii) Formation of a proposal on Big Data Analytics in the area of NCDs – Cancer/ Diabetes (**Action: Dr. Prashant Mathur, ICMR-NCDIR; Dr. Prabhdeep Kaur, ICMR-NIE and IIPH, Hyderabad**) (iv) A workshop on Mathematical Modelling to be organized with major participation from ICMR scientists. (**Action: Prof. S. Pyne, IIPH, Hyderabad and DIC, ICMR-NIMS**) (v) A Heckathon Program involving students should be carried out on readily available dataset of NNMB. (**Action: Division of ISRM, ICMR, Director, ICMR-NIN**)

Training workshop on "Statistical Methods in Biomedical Research and Data Analysis Using Statistical Software (SPSS/R)"

The objective of the workshop was to enrich the knowledge and develop computational ability of researchers, scientists and biostatisticians who are working in various organizations i.e. medical research institutes, medical collages and pharmaceutical organizations.

There were lectures on various topics of Statistical methods and Study design, Data management and preparation of data file for analysis, and hands on computer training for statistical computing during the workshop.

Date	Workshop Details
March 3-4, 2017	Workshop on Economic Evaluation
	The aims of the workshop were: 1. To bring together a combination of interested scientists and researchers of ICMR who are trained in epidemiology, statistics and economics to understand the basics of economic evaluation of health interventions and health care services. 2. The overall aim was to stimulate interest among the researchers to undertake simple cost effectiveness studies in India. Denny John, Evidence Synthesis Specialist with the Campbell Collaboration, New Delhi and Prof Ramesh Bhat, President, Indian Health Economics and Policy Association (IHEPA) and the chairperson: Public-Private Mix RNTCP National Technical Working Group, Ministry of Health and Welfare, Government of India were the two faculties. *The recommendations of the workshop were the following* 1. Health economists' work closely with multidisciplinary teams such as clinicians, epidemiologist and statisticians given the common methodological challenges. 2. The academicians and policymakers engage early in the evaluative process and work closely together to translate economic evidence into effective and useful decision-making processes. 3. Strengthening such networks may also improve the appropriateness of economic methods and generalizability of findings. 4. Build capacity within the Government through such workshops and through learning-by-doing. 5. Appropriate funding for the comprehensive economic evaluation of health interventions should be sought by interested researchers. 6. A Working group on Health Economics may be formed at the NIMS with key health economists from national and international organizations and scientists from ICMR Institutions and Headquarters as members who can mentor some of the scientists of ICMR for

undertaking economic evaluations studies.
7. As a follow-up activity the participants may be engaged in economic evaluation studies that may be considered for funding by ICMR.
8. More such workshops may be organized at NIMS to sustain interest among the participants.

January 16, 2017	3rd Prof PP Talwar oration by Prof NK Ganguly, formar DG, ICMR and distinguished Biotechnology Fellow & Advisor, THSTI on "Value of Measurements in Health : Impact on Forecasting and Evaluation" organized by NIMS New Delhi

H. Awards

Date	Title of the Award	Name of awardees
May 3-13, 2016 in Greece	**Nominated by DG ICMR** for attending the Global Burden of Disease (GBD) Technical Training Workshop held on May 3-13, 2016 in Greece. Awarded **ICMR Scholarship** for attending the "Global Burden of Disease (GBD) Technical Training Workshop" held during May 3-13, 2016 in Greece. This is in continuation of the efforts towards strengthening the training and capacity building of ICMR Statisticians for the State Disease Burden Initiative between ICMR, Public Health Foundation of India (PHFI) and Institute of Health Metrics and Evaluation (IHME), USA.	Dr.Geetha R. Menon Dr. Lucky Singh
November 2017	Prof. P.V.Sukahtme Award for best published paper on Sampling or nutrition	Dr. Tulsi Adhikari
August 2016	Awarded Ph.D. in Medical Statistics, Guru Govind Singh Indraprastha University, Dwarka, Delhi.	Dr. Jitenkumar

I. Foreign Visit

Date	Details of the foreign visit with picture
May 3-13, 2016	Dr.Geetha Menon and Dr.Lucky Singh attended the "GBD Technical Training Workshop", held at Negroponte Resort, Greece hosted by Institute for Health Metrics and Evaluation (IHME).
March 6-10, 2017	Dr.Damodar Sahu attended the HIV Estimates and Projections Training workshop in collaboration with WHO Regional Offices, CDC, UNICEF, Futures Institute, East West Center and other partners at Pullman Hotel Bangkok, organized by UNAIDS Regional Support Team Asia-Pacific Office, Bangkok Thailand.

J. Statistical Consultancy

Dr. Ajit Mukherjee
- Provided consultancy to Division of RBMH & CH, ICMR in designing and sample size computation for task force studies on combating Childhood Anemia, Chilhood Injuries and Haemoglobinopathy in Tribal Population of Tamil Nadu
- Provide statistical inputs in finalizing various documents of Management and Systems Division of Bureau Of Indian Standards (BIS), New Delhi

Dr. H.K.Chaturvedi
Provided statistical consultancy for design of study, workout sample size and Statistical Analysis etc. – For MD students from following Hospitals and Research Institutes
 All India Institute of Medical Science
 Kalawati Children Hospital, Lady Harding Medical College, New Delhi
 RML Hospital, PGIMER,New Delhi
 Amity University, NOIDA
 Rajkumari Amrit Kaur College of Nursing

Dr. Tulsi Adhikari
- Provided statistical consultancy to students and researchers from various hospitals and research institutes in Delhi NCR, viz, VMSS and Safdurjung Hospital, AIIMS, RML hospital, Institute of Hoe Economics, Delhi University, etc. in designing and analysis of thesis and research projects.

Dr. Atul Juneja
- Guided students and faculty in designing and analysis of their research projects from RML Hospital, Hospital, Safdarjung Hospital Bl Kapoor Memorial Hospital.
- Advised CCRAS and CCRH in their research projects on statistical aspects.
- Advised Talwar Research Foundataion for their research projects for statistical issues.

K. Members of the Ethics Committee

1.	Prof. S.D.Seth, Ex-Advisor, Clinical Trial Registry-India, Ansari Nagar, New Delhi-110029.	Chairman
2.	Dr. Sudesh Nangia, UGC faculty Recharge Programme, Old CRS Building, JNU, New Campus, New Delhi-110067.	Member
3.	Dr. Sanghamitra Acharya, Director, Indian Institute of Dalit Studies, D-II/1, Road No.-4, Andrews Ganj, New Delhi-49.	Member
4.	Dr. Shashi Kant, Professor, Centre for Community Medicine, AIIMS, New Delhi 110029.	Member
5.	Dr. G.C. Shukla, Advocate, Supreme Court of India, New Delhi.	Member
6.	Prof. Arvind Pandey, Ex-Director, NIMS, Ansari Nagar, New Delhi.	Member
7.	Dr. S.K. Benara, Scientist 'F', National Institute of Medical Statistics, Ansari Nagar, New Delhi-110029.	Member Secretary

K. Members of the Scientific Advisory Committee

1.	Prof. P.P. Talwar, Ex-Head, Deptt. of Statistics, NIHFW, B-1/1020, Vasant Kunj, New Delhi.	Chairman
2.	Dr. Padam Singh, Ex-Additional DG, ICMR Head - Health Research, New Delhi.	Member
3.	Prof. D.C.S. Reddy, Ex.-Head, Deptt. of PSM, BHU 506, Consultants Flats, T.G. Complex, K.G.M.U., Lucknow-226003.	Member
4.	Dr. R.C. Yadav, Professor, Department of Statistics, B.H.U., Varanasi 221 005.	Member
5.	Prof. D.K. Subbakrishna, Ex. Prof. & Head, Department of Biostatistics, National Institute of Mental Health & Neuro Sciences (NIMHANS), Bangalore-560029.	Member
6.	Dr. Shashi Kant, Professor, Centre for Community Medicine, All India Institute of Medical Sciences, New Delhi-29.	Member
7.	Dr. S.N. Dwivedi, Professor Deptt. of Biostatistics, AIIMS, New Delhi-29.	Member

8.	Dr. V.K. Srivastava, Chief Director, Ministry of Health & Family Welfare, Nirman Bhawan, New Delhi-110011.	Member
9.	Prof. C.M. Pandey, Professor & Head, Deptt. of Biostatistics & Health Information, Sanjay Gandhi Postgraduate Institute of Medical Science(SGPGI) Lucknow-226014.	Member
10.	Representative of RGI Office, Shri Shailesh	Member
11.	Dr. P.L. Joshi, Adviser, NIMR, Ex. DDG, Leprosy & Malaria, MOHFW, New Delhi.	Member
12.	Dr. Neena Valecha, Director, National Institute of Malaria Research, Dwarka, New Delhi.	Member
13.	Dr. R.R. Gangakhedkar, Director-in-charge, National AIDS Research Institute, Plot No.73, Block G, MIDC Complex, Bhosari, Pune-411026.	Member
14.	ICMR Representative, Head, ECD	Member
15	Dr. Arvind Pandey, Director, NIMS, New Delhi.	Member Secretary

L. Staff

Name	Designation
Scientific	
Dr D.K. Shukla	Scientist G
Dr Ajit Mukherjee	Scientist F
Mr Ajit Mathur	Scientist F
Dr S.K. Benara	Scientist F
Mr BS Dhillon	Scientist F
Dr H.K. Chaturvedi	Scientist F
Dr Anil Kumar	Scientist F
Dr Damodar Sahu	Scientist E
Dr Tulsi Adhikari	Scientist D
Dr Atul Juneja	Scientist D
Dr Geetha R. Menon	Scientist D
Dr Saritha Nair	Scientist D
Dr BK Gulati	Scientist C
Dr Jiten Kumar Singh	Scientist C
Dr Lucky Singh	Scientist C
Mr Bhagirath Lal	Scientist B
Dr Saurabh Sharma	Scientist B
Technical	
Mr. Vinay Kumar	Principal Technical Officer
Mr. Rajendra Singh	Principal Technical Officer
Mr. Suman Kumar Bara	Senior Technical Officer (3)
Mr. Gurmeet Singh Rana	Senior Technical Officer (3)
Mr. Shiv Kumar	Senior Technical Officer (3)
Mr. Parmatma Mahato	Senior Technical Officer (3)
Mr. Subhash Gautam	Senior Technical Officer (2)
Mr. Krishan Lal Badolia	Senior Technical Officer (2)
Mr. Ajay Kumar	Senior Technical Officer (2)
Miss Sunita	Senior Technical Officer (2)
Mr. Charan Singh	Senior Technical Officer (2)
Mrs. Parbila Toppo	Senior Technical Officer (2)
Mrs. Madhu Mehra	Senior Technical Officer (1)
Mr. Kapil Gautam	Senior Technical Officer (1)
Dr Jeetendra Yadav	Technical Officer
Mr. Yatender Kumar	Technical Assistant
Mrs Aspinder Kaur	Technical Assistant
Mr. Thandimal	Technical Assistant
Mr. Ganesh Prasad Jena	Technical Assistant
Mrs. Geeta Sharma	Senior Technician (3)
Mrs. Indu Rani	Senior Technician (3)
Mr. Rajkumar Yadav	Senior Technician (2)
Administrative	
Ms Poonam	Administrative Officer
Mrs Neha Govind	Accounts Officer

Mrs. Usha Gulati,	Private Secretary
Mr. Balraj Sharma,	Section Officer
Ms. Raj Kala,	Section Officer
Ms. Shalini Bhatia,	Assistant
Mr. Mukesh Kumar Kaushik,	Assistant
Ms. Kusum Luthra,	Assistant
Mr. Brij Mohan Malhotra,	Assistant
Mr. Brahm Pal Singh,	Assistant
Ms. Satvinder Kaur,	Personal Assistant

Group-C (Administration)

Mr. Desh Bandhu	Sr. Driver
Mr. Dharamvir Singh,	Attendant (Service)
Mr. Gopi Chand	Attendant (Service)
Mr. Jagili Sabar	Attendant (Service)
Mr. Gyan Chand,	Attendant (Service)
Mr. Neeraj Kumar	Attendant (Service)
Ms. Raj Mala	Attendant (Service)