Annual Report 2010-11

# National Institute of Medical Statistics



ICMR Celebrating hundred years in the service of the nation 1911 - 2011



#### PREFACE

It is my privilege to present before you the annual report of National Institute of Medical Statistics for the year 2010-11. The Institute carried out a number of capacity building programs for the students of statistics and various health personnel working in different health institutions.

The Institute handled 9 research projects during the year wherein 5 have been reported as complete. The Institute has been collaborating with National Institute of Health & Family Welfare (NIHFW) for the NACO's HIV Sentinel Surveillance, and estimates HIV burden in the country since 2003 in conjunction with WHO and UNAIDS.

NIMS acted as the nodal agency for the conduct of the IDSP-NCD Risk factor Survey in all the States of the Country the report of which was disseminated by this Institute through the workshop held in collaboration with Div of NCD ICMR of various stake holders.

Clinical Trial Registry – India (CTRI) has been functioning at NIMS since 20th July 2007. The CTRI is a online public record system for registration of all clinical trials being conducted in our country. During the current year the new version of CTRI software application is being developed with the support of National Informatic Centre. It has the added facility of audit trail and advanced search mechanism etc.

Study for the evaluation of the Viremia in health adults after single dose of vaccination of JE SA 14-14-2 has been reported as complete

The study on Epidemiological Analysis and Estimation of the trend and burden of HIV, and Analytical Report of HIV Sentinel Surveillance 2008-09, India has been reported as complete.

The Institute was involved in the end line survey of the project home based management of young infants, survey of which was completed during the previous year. The in dept analysis of the data is in progress at the Institute.

The Institute has been partnering the conduct of Integrated Biological and Behavioural Assessment (IBBA) under the over all coordination of ICMR's National AIDS Research Institute

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(NARI), Pune for the high way component (IBBA-NH). This project has been reported as complete and the results will contribute to AIDS control program in India.

The Institute has been involved in the development of the survey methodology to estimate the disease burden due to leprosy at national level. Taking the lead from the pilot survey in Bareilly district a National level survey has been planned to estimate the burden of leprosy in the country.

The study on Infant and Child Mortality in India which examines the time trends of neo-natal, post neo-natal, infant and under-five mortality in India and its major states, is being reported as complete. Analysis based on Autoregressive integrated moving averages (ARIMA) model shows that without further intervention, India will not be able to achieve the set target of an U5MR of less than 39 in MDG4 goal by 2015.

The task force study to estimate the maternal mortality raio in Rajasthan and Orissa is ongoing.

The study on the Prevention of HIV/STI among Married Women in Urban India (A five-year NIH funded project), is another ongoing study aiming at developing and evaluating a culturally appropriate, theory-driven, health facility-based intervention utilizing enhanced women's health services and intervention with couples to promote primary prevention of HIV and other sexually transmitted infections (HIV/STI) among married women, ages 18-40, living in an urban poor community in Mumbai, India.

This Institute has been providing technical support to the evaluation surveys at the Ministry of Health & Family Welfare, Govt. of India, viz. District Level Household Survey (DLHS-3), Annual Health Survey (AHS) and NRHM Concurrent Evaluation etc.

The Institute has carried out capacity building programmes, such as Training Workshops on clinical trials and statistical computing, Disseminations Workshops for Clinical Trials Registry for the health personnel and researchers in the country. Numbers of training programmes have been organized on Applied Statistics for the M.Sc. Students of different universities.

The Institute has been involved in organization of Annual conference of Indian Society for Medical Statistics in collaboration with National Institute of Heath and family Welfare and Indian

Association for study on Population at Bhubaneshwar. The Institute has also brought out proceedings in form of edited book of IASP conference held in 2009 at Tirupati.

The scientists of the Institute have participated in number of National and International conference and published articles in peer reviewed journals.

## I Training/Workshops/Conferences Organized

## 1. Dissemination workshop of CTRI

## *Date : 25<sup>th</sup> June 2010*

Organised WHO funded Dissemination workshop of CTRI on 25<sup>th</sup> June 2010 at Smt. NHL Medical College and Hospital, Ahmedabad

## Objective

The objective of the dissemination workshop was to disseminate the information of clinical trials registry-India. The workshop was funded by WHO. The genesis and the process of registration were presented and explained by Prof. Arvind Pandey, and Dr. Abha Aggarwal, Prof. S.D.Seth , Chaired the workshop. About 100 participants involved in conduct of clinical trials from various field of clinical research attended the workshop.



Members on the dais are Dr. Pankaj R. Patel(L), Dean, Smt. NHL Municipal Medical CollegeProf. S .D.Seth, Shri H.G.Koshia, Commissioner, Food and Drug Control, Gujarat, Prof. Arvind Pandey and Dr. Abha Aggarwal





participants on the genesis of CTRI & Dr. Abha Aggarwal demonstrating the process of trial registration.

## 2. Clinical Trial and Statistical Computing

Date: 24-28 February, 2011 at NIMS New Delhi

Objective

- The workshop intended to provide training to the medical researchers/scientists to acquire good understanding of Statistical methodology used in clinical trials designing and application of analytical tools being used for analysis and interpretation of data.
- The topics covered during the training on clinical trial were introduction, types of design, method of randomization, determination of sample size, ethics, protocol design, management of clinical trial study, clinical trial Registry, survival analysis and statistical computation by using SPSS software.



No. of Participants: 28 (twenty eight) Sponsorship: Department of Health Research, Ministry of Health and Family Welfare, Government of India, and Indian Council of Medical Research, New Delhi.

The Training Workshop on "Clinical Trial and Statistical Computing" was organized at National

Institute of Occupational Health (NIOH), Ahmadabad by the National Institute of Medical Statistics, New Delhi during 24-28 February, 2011. The workshop was sponsored by the Department of Health Research, Ministry of Health and Family Welfare, Government of India, and Indian Council of Medical Research, New Delhi. The participants attended the training were



mainly the researchers from NIOH and local medical colleges/Institute of Ahmadabad. Besides the four faculties of NIMS, the three local resource persons working in this field were invited and delivered a talk and share their valuable experiences in this field.

## 3. Dissemination Workshop of the project "IDSP-NCD Risk Factors Survey" organized by ICMR with technical support of NIMS.

## Date: 15<sup>th</sup> December, 2010

## Objective

To disseminate the findings of the IDSP-NCD Risk Factors survey to the major partners, state health authorities and other stakeholders including the line departments of MOHFW.

## No. of participants: More than sixty

## Sponsorship: Funded by World Bank through MOHFW

The dissemination workshop of the project 'IDSP-NCD Risk Factors Survey' was organized by ICMR with the technical support of NIMS on 15<sup>th</sup> December, 2010. The finding of the projected was presented by NIMS team and printed copies of reports were released.

## 4. Summer Training:

## Title: Summer Training for Postgraduate Students of Statistics/Biostatistics

## Duration: May – June, 2010

## Objective:

- It is to provide Job training to the Postgraduate students to acquire good understanding of Statistical work carried out in the Institute and provide practical training on statistical methodology and its application.
- The students are also guided by the scientists to work on secondary data and prepare a small project report as a process of learning. They were also trained to use statistical software for data analysis.

No. of PG students: Six from Delhi University, One from PHFI, New Delhi and Five from BHU, Varanasi (total 12 students)

## 5. The 28<sup>th</sup> Annual conference of Indian Society for Medical Statistics

Date: 11-13 November, 2010 at NIHFW, New Delhi

The 28<sup>th</sup> annual conference of Indian society for medical statistics was organized in collaboration with National Institute

of Health and family Welfare from 11-13 November 2010 with a theme of Medical Statistics in improving health and hospital management. A pre conference workshop Health System research was also held on 10 November 2010



which was attended by young researchers from different medical

institutions.

The Inaugural session of the XXVIII ISMS Conference during November 11-13, 2010. Dr V.M.Katoch, Secretary, DHR, Govt of India and DG, ICMR was the chief guest and Dr RK Srivastava DGHS MOHFW was the Guest of Honour on the occasion.

Dr VM Katoch Secretary Department of Health Research and Director General ICMR was the chief Guest on the occasion with Dr RK Srivastava DGHS MOHFW was the Guest of Honour on the occasion who also delivered the inaugural address. The welcome address was delivered by Prof Deoki Nandan Director NIHFW. Prof Arvind Pandey Director National Institute of Medical Statistics and President ISMS delivered the presidential address. Prof SK Bhattacharya oration was delivered by Prof Partho Mazumdar. The various technical sessions addressed the issues on HIV/ AIDS, Epidemiological modeling in communicable and non communicable diseases, Reproductive Health and Nutrition large scale surveys, biostatistical methods, survival analysis, stocastics process etc.

The valedictory session was presided by Dr SK Das Director General, Central Statistical Organisation. The session included presentation of Memento to organizing Secretaries Dr RJ Yadav and Prof VK Tiwari. The conference was attended by more than 300 delegates.



The valedictory session of the XXVIII ISMS Conference. Dr S.K.Das, Director General, Central Statistical Organisation presided over the occasion accompanied by Dr Arvind Pandey along with his organizing team of the conference.

## 6. XXXII Annual Conference of the Indian Association for the Study of Population

## Date: 28-30 November, 2010 atUtkal University, Bhubaneswar.

The XXXII Annual Conference of the Indian Association for the Study of Population (IASP) was held at Utkal University, Bhubaneswar during Nov 28-30, 2010. The theme of the conference was "Population and Public Health" with sub-themes being (1) Public Health Challenges in India (2) Public Health Programmes in India and their Impact (3) Public Health Communication (4) Morbidities due to Communicable Diseases (5) HIV/AIDS Control and Challenges (6) Reproductive and Child health (7) Review of Status of NRHM (8) Urbanization and Urban Health (9) Tribal Health and (10) Population, Environment and Public health.

The conference began on Nov 28, 2010 with the President's address by Prof Arvind Pandey

President, IASP, inaugural address by Honb'le Justice SC Mahapatra and Chairman's remarks by Prof Binayak Rath, Vice Chancellor, Utkal University, Bhubaneswar. The inaugural session was attended by over 300 researchers, teachers, policy and programme



managers and programme officers from various organizations such as UNICEF, UNFPA, Population Council, IIPS, ICRW, PFI, ISEC, TISS, BHU, JNU, Utkal University faculty and students etc.

The proceedings of the 31<sup>st</sup> Annual Conference in the form of a published book "Population and Reproductive Health: Perspectives and Issues" edited by U V Somayajulu, KK Singh, KVR



Subrhamanyam and Arvind Pandey was released during the conference. Other books got released include : "Population, Health and Human Resources in India's Development" by SC

Gulati, "Population, Gender and Reproductive Health" by F Ram, S Unisa and T V Sekhar, and "Ageing in India" by N Audinarayana, Two reports viz., "Rapid Appraisal of NRHM in Sambalpur and Kendrapra Districts" by PRC, Bhubaneswar were also released.

In all, the conference had 1 Panel discussion(on 2011 Census), 3 Plenary sessions (on Child Health, DLHS and NRHM dissemination and HMIS) with 10 paper presentations, 23 technical sessions with more than 100 paper presentations and 3 poster sessions with about 100 poster presentations, more than 250 delegates covering length and breadth of India

## <u>Foreign Visits</u>

Dr. Arvind Pandey, Director of the Institute attended the XVIII International AIDS Conference (AIDS 2010), from July 18-23, 2010, at Reed Messe Wien (RMW), at Austria, Vienna Also visited International Institute of Applied System Analysis (IIASA).

## **II. Scientific Programmes**

## (a) Completed Studies

## 1. Behavioural and Biological Assessment on National Highways (IBBA-NH) Round-2

Date of Initiation: June 2005

Date of Completion: April 2011

Funding Agency: BMGF through FHI

**Background:** Truckers, particularly those who ply on National Highways for longer distances, are said to play an important role in the HIV epidemic across the glob including India. They constitute part of a larger bridge population constituted mainly by clients of female sex workers in the country. The National AIDS Control Program (NACP) focuses on the truck drivers to slow the spread of HIV from core groups to bridge and general populations. The three major components of the target interventions among truckers included (1) Behavioural Change Communication (2) Condom promotion activity through social marketing and free distribution of condoms, (3) Treatment of sexually transmitted infections (STIs).

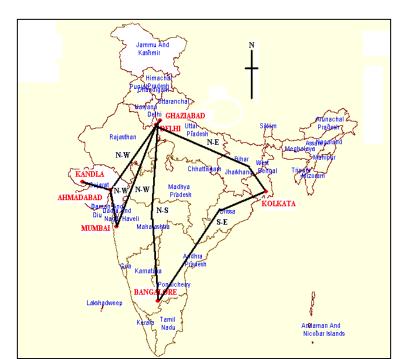
Avahan, the India AIDS Initiative of the Bill & Melinda Gates Foundation (BMGF) started in India in 2004 with the aim of slowing down the HIV epidemic through focused, integrated, large-scale prevention programs providing saturated coverage to key populations. Integrated Behavioral and Biological Assessment on National Highways (IBBA-NH) represents an overall strategy to evaluate the Avahan intervention among long distance truck drivers (LDTD). A LDTD defined as driver who took consignment from one place to destinations located along the national highways traversing more than 800 kilometers one-way before returning to the place of origin.

The objectives of the IBBA-NH were:

- **1.** To measure the major outcomes and impact of the Avahan intervention programme by collecting behavioral and biological data from long distance truck drivers.
- **2.** To make information available for modeling the impact of the Avahan intervention program.

## Survey Methodology:

With these objectives, the first round of IBBA-NH was conducted in 2007 at seven transshipment locations (TSL) covering the bulk of India's transport volume along four routes, North-East (NE), North-South (NS), North-West (NW) and South-East (SE). The route categories were the extreme road corridors traveled by long distance truck drivers. The transshipment locations on the four route categories were selected through key informant interviews with transport industry leaders that indicated that a majority of the truck drivers on the four route categories stop at least at the selected TSL for a long period of time. These were- Sanjay Gandhi Transport Nagar (SGTN), New Delhi; Ghaziabad Transport Nagar, Uttar Pradesh; Kalamboli, Mumbai; Narol Chowkdi, Ahmedabad; Gandhidham, Kandla; Neelamangala, Bangalore and Territy bazar, Kolkata. Following map shows the locations of these TSLs :



The second round of IBBA-NH (IBBA-NH Round- 2) was conducted in 2009 – 2010 as follow-up survey to assess the changes in behavioral and biological indicators from baseline. It was conducted at same transshipment locations except for Kandla along the four aforesaid routes (namely, NE, North-South NS, NW and SE). It covered a total of 2,085 long distance truck drivers (NE- 524; NS- 538; NW- 526; SE- 497).

## Survey Design:

Similar to the first round, a two-stage Time Location Cluster (TLC) sampling was adopted to select the LDTD plying on a particular route. Same methodology and protocol were followed in both rounds of the survey to collect information on demography, work, mobility, sexual behavior – female sexual partners (wife, paid partner and non-paid partner), male/ transgender sexual partners, condom use, drug and injection practices, history and symptoms of sexually transmitted infections (STIs), knowledge of HIV and its prevention and exposure to HIV prevention interventions undertaken by Avahan and others. For the behavioural assessment, confidential, face-to-face interviews using structured questionnaires were used to collect data from truck drivers. Blood and urine samples were collected from all participating truckers. Specimens were tested for HIV, reactive syphilis serology, *Neiserria gonorrhoeae, Chlamydia trachomatis* and herpes simplex virus type-2 (HSV-2 in 10% of samples).

## Data Management and Analysis

- The behavioral data were entered twice by two different data entry operators (one at CORT and another at NIMS) using computer software "Census and Survey Processing System" (CSPro- version 3.1).
- Inconsistencies in the data were sorted out by comparing two data sets and verifying with the questionnaire;
- The cleaned data were used for statistical analysis. Computer Software "Stata" (version 10.0) has been used for data analysis.

Summary of Findings:

Following are the key findings from the two rounds of the survey. For ease of presentation and clarity, the first round of the survey is denoted as R-1 and second round as R-2.

#### **Demographic Characteristics**

*Current Age:* The median age of the respondents plying on four routes ranged from 28 - 32 years in R-2, whereas it was 28 – 33 years in R-1. Drivers plying on the SE route were the oldest among the four surveyed routes in both rounds of the survey.

*Literacy and Education:* More than four-fifth of the respondents (83-90% in R-1 and 88 -98% in R-2) were literate. The average grade completed by respondents was 8 years in R-1 for all the four routes, whereas it was 7-9 years in R-2.

*Marital status:* Most of the respondents (72 - 82% in R-1 and 71 - 84% in R-2) were currently married. The proportion of currently married truck drivers was the highest in the SE route in both rounds (82% in R-1 and 84% in R-2). In R-1, it was lowest in the NW route (72%) while in R-2, NS (71%) was at the bottom.

*Nativity:* In both rounds of the survey, truckers plying on the NE route were predominantly from the state of Uttar Pradesh (47% in R-1 and 64% in R-2) and Bihar/Jharkhand (29% in R-1 and 13% in R-2). More than three-fourth of the truckers plying on the NS route were from North-Indian states in both rounds of the survey. A similar nativity pattern was observed on the NW where more respondents belonged to the North-Indian states. However, long distance truck drivers from the SE route were mainly from the states of Andhra Pradesh/Karnataka (68% in R-1 and 67% in R-2) and Tamil Nadu (25% in R-1 and 15% in R-2).

#### Work Profile & Mobility

**Duration of employment:** During both the survey rounds, the mean duration of working as a truck driver on NE, NS and NW routes ranged from 8 to 10 years. On the other hand, it was 11 years for truckers on the SE route in both rounds. In both rounds, about 90% or more respondents reported having spent some time as 'helpers' or 'assistants' to the main drivers before being upgraded as main drivers. The mean duration of working as cleaner/ helper was reported to be about two years for drivers plying on the NE, NS and NW in the two rounds of the survey. However, respondents from SE consistently spent longer periods working as helpers/assistants as the average duration remained at 4 years.

**Ownership of trucks:** More than four-fifth of the respondents plying along the four routes reported driving vehicles owned by a transporter/ broker or fleet owner in two survey rounds.

Helpers engaged: On an average, a LDTD employed about two- three helpers/ cleaners in the

past one year and 3-5 helpers in the past two years. In both R-1 and R-2, drivers plying on SE route employed more helpers during the past one and two years, meaning that they changed the helpers more frequently than their counterparts plying on the remaining routes.

**Number of days taken for round trip:** In general, the long distance truck drivers spent 10 to 12 days for one round trip during R-1 and 10 to 13 days in R-2 surveys, which included the time spent for driving to the destination, unloading and reloading the next consignment and driving back to the place of origin. A majority of the drivers took at least 8 days to complete one round trip between the main cities of operation.

*Time spent at destination city:* In general, the time spent at destination city was reported to be less in the second round of the survey than that reported in the first round (NE: 48 hours in R-1 and 24 hours in R-2; NS: 72 hours in R-1 and 24 hours in R-2; NW: 48 hours in R-1 and 25 hours in R-2). The only exception was the SE route where the average (median) remained unchanged (48 hours).

## Sexual Behaviour

*Age of first sex:* The median age at first sex varied between 18 to 20 years across the four routes in both R-1 and R-2. Not much change was observed in the median age of sexual debut for the four routes over two rounds of the survey.

Sexual Behavior with Paid female partners (PFP): Percentage of respondents who had sex with PFP during the past 12 months remained unchanged for NE (25% in R-1 and 26% in R-2) NS (30% in R-1 and 29% in R-2) and NW (29% in both R-1 and R-2). However, there was a substantial decline in the percentage of such respondents for SE route (44% in R-1 and 14% in R-2). The median age at first paid sex increased from 20 years to 21-22 years across the four routes between R-1 and R-2. The mean number of PFP in the past one month decreased for NS (6 to 3), NW (5 to 4) and SE (7 to 4) routes but increased for NE route (5 to 7).

**Sexual Behavior with Non-paid female partner (NPFP):** In R-1, it was noted that about one-fifth of the respondents had sex with NPFP during the past 12 months. The scenario was similar for R-2, except for NW route, where the proportion having sex with NPFP increased from 22 to 34%. The mean number of NPFP, among those who had sex with them in the past 12 months ranged from 2 to 3 in both the rounds.

#### Condom use

Last time condom use with various types of partners: Most of the respondents reported having used a condom during their last sexual encounter with a PFP. This percentage ranged from 73 to 92% in R-1 and 75 to 96% in R-2 across the four routes. An increase was observed in the last time condom use with non-paid female partners.

Consistent condom use with PFP was reported to be high in both rounds of the survey ranging from 64 to 74% in R-1 and from 66 to 95% in R-2. Report of consistent condom use with NPFP increased in R-2 as compared to that in R-1, though there was a variation among the four routes.

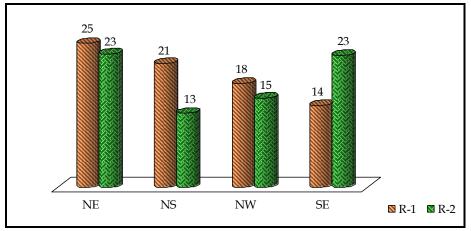
Consistent condom use	NE		NS		NW		SE	
	R-1	R-2	R-1	R-2	R-1	R-2	R-1	R-2
Wife	5.4	2.8	2.8	1.3	4.7	0.9	0.5	0.0
Ν	(375)	(389)	(405)	(383)	(373)	(387)	(422)	(417)
Paid Female Partners	69.8	66.0	73.7	78.6	67.7	76.0	64.3	94.9
Ν	(124)	(134)	(163)	(156)	(150)	(150)	(224)	(69)
Non-Paid Female Partners	19.6	33.7	21.4	50.2	16.7	34.5	14.0	31.6
Ν	(88)	(121)	(117)	(92)	(112)	(179)	(107)	(76)
Men/ Hijra Partners	49.6	32.1	73.7	41.3	13.7	16.7	16.7	0.0
Ν	(6)	(19)	(9)	(14)	(23)	(27)	(6)	(3)
Base: Those who had sex with respective partners during past 12 months								

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Reasons for not using Condom with various partners: The main reasons for not using/inconsistent use of condom with paid and non-paid partners were- 'condom use reduces pleasure' and 'non-availability of condom at the time of sex'.

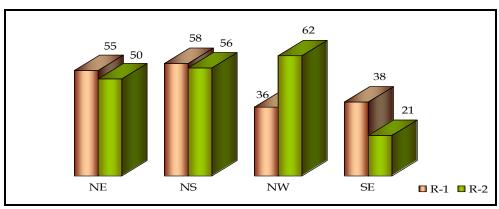
Awareness about STI: The level of knowledge about STIs remained high in the two rounds of the survey (range: 75 – 94% in R-1 and 52 – 72% in R-2).

## Percentage of Respondents Who Have Comprehensive Knowledge of HIV/ AIDS



Base: All Respondents

*Awareness about HIV/AIDS and Exposure to intervention:* About half of the surveyed respondents operating on the NE (R-1: 55%, R-2: 50%) and NS (R-1: 58%, R-2: 56%) routes had heard of Khushi clinics, while this was low among drivers traveling on the NW (R1: 36%, R-2: 62%) and SE (R-1: 38%, R-2: 21%) routes. Compared to other routes, a large proportion of drivers cruising on SE route had heard of other NGOs and/or programmes which provided services on HIV education / prevention (NE: 3% in R-1 and 12% in R-2; NS: 5% in R-1 and 10% in R-2; NW: 5% in R-1 and 8% in R-2; SE: 44% in R-1 and 21% in R-2).

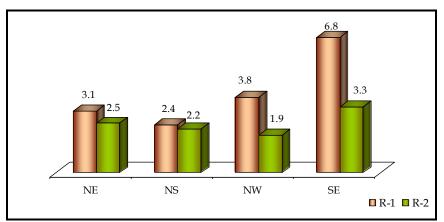


Percentage of Respondents Who Ever Heard About Khushi Clinics

**Prevalence of STI/ HIV**: Syphilis was the most prominent STI. It remained at the same level (3.7%) for NE in both rounds, whereas it declined for NS (from 3.2% to 1.3%), NW (from 3.0% to 1.3%) and SE (from 1.2% to 0.2%) routes over the two rounds of the survey. HIV prevalence among truckers had a declining trend with maximum decline observed among those plying on SE

Base: All Respondents

(6.8% in R-1 and 3.3% in R-2) followed by NW (3.8% in R-1 and 1.9% in R-2). Decline in HIV prevalence was relatively smaller in the remaining two routes, namely, NE (3.1% in R-1 and 2.5% in R-2) and NS (2.4% in R-1 and 2.2% in R-2) routes.



HIV Prevalence among LDTD Plying on the Four Routes

Base: All Respondents

## 2. Epidemiological Analysis and Estimation of the trend and burden of HIV, 2008-09, India

Date of initiation: April 2010

Date of completion: March 2011

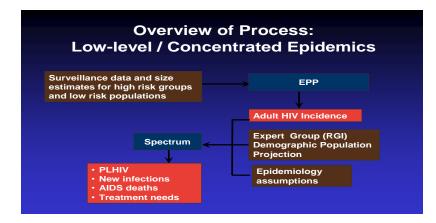
Study supported by: NACO

Background:

The National Institute of Medical Statistics is the lead agency to support NACO for providing estimation of HIV burden in India and states. It carries out the data management, analysis, and estimation of HIV/AIDS burden and preparation of analytical report of NACO's HIV sentinel surveillance (HSS). It adopts a systematic and consultative process of HIV burden in the country among the epidemiologists, demographers, public health experts and monitoring and evaluation specialists from premier national institutions and, the WHO and UNAIDS. The India HIV Estimates 2008/2009 used available data from 1998 to 2009 on population based surveys, HIV Sentinel Surveillance Surveys etc. The estimates are generated using Estimation Projection Package (EPP) and Spectrum Package that had been customised using Indian data. This methodology allows international comparison of the HIV estimates.

#### Estimation Process 2008 and 2009:

The overview of 2008/2009 estimation methodology given below:



## The Process for generating India HIV Estimates 2008/2009

The EPP estimates the trends over time of HIV prevalence by fitting an epidemiological model to the surveillance data provided by HIV sentinel surveillance (HSS) systems. It was developed to fit to multiple points with four parameters, namely,

t0 – The start year of the HIV epidemic;

r – The force of infection. A large value of r will cause prevalence to increase rapidly while a small value will cause it to increase slowly;

f0 – The initial fraction of the adult population at risk of infection. The parameter determines the peak level of the epidemic curve.

 $\phi$  – The behaviour adjustment parameter. This parameter determines how the proportion of new entrants in the adult population who are at risk of HIV infections changes over time. If phi is negative, people reduce their risk in response to the epidemic and the curve shows a sharper prevalence decline after the peak. If phi is zero, the proportion at risk remains constant and the prevalence declines after the peak as people die. If phi is positive, risk actually increases over time and prevalence falls less quickly or stabilizes at a high level.

In low-level or concentrated epidemics a fifth parameter, **d**, is included to account for the exit or turnover of people from the higher risk population groups. The EPP has provision to use ART data which increases survival of people living with HIV, hence increasing prevalence and impacting the process of fitting an epidemiological model to the HIV epidemic. It also improved fitting procedures and uncertainty estimation has been incorporated.

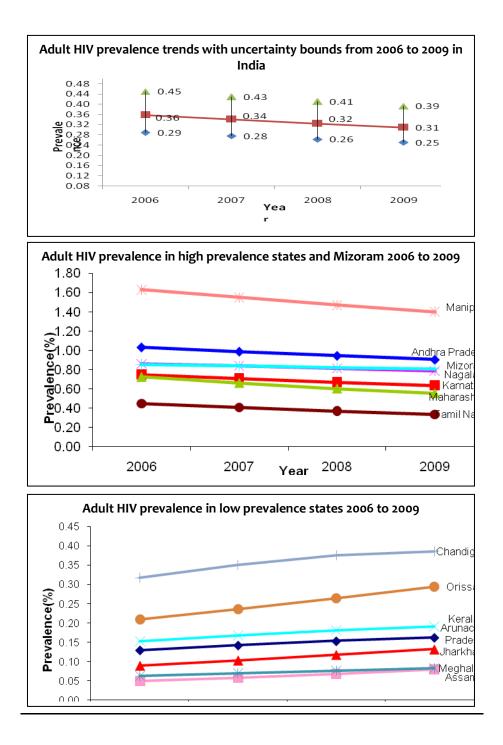
- I. It develops epidemic curve separately for different sub-populations and then combines to produce a single epidemic curve which estimates HIV prevalence at the national level. The output serve as input to Spectrum for assessing incidence, impacts, ART need, AIDS deaths etc. The incidence values are to be used in Spectrum to estimate the demographic and other impacts of the epidemic, calculates Prevalence and Incidence for each subgroup and the total population.
- II. Includes the influence of ART on prevalence and incidence in fitting the epidemic curve.
- III. It uses an improved algorithm to generate better fits and more accurate uncertainties and allows user to calibrate projections after fitting.

**Spectrum:** Spectrum is a policy modelling system consisting of modules for a number of reproductive health areas. Two Spectrum modules, the demographic projection (DemProj) and the AIDS Impact Model (AIM) are used for making a national HIV estimate. National/regional prevalence projections produced by the EPP are the input in Spectrum to calculate the impact of the epidemic. The AIM is a computer program for projecting the impact of the AIDS epidemic. It projects the consequences of the HIV/AIDS epidemic, including the number of people living with HIV/AIDS, new infections, AIDS deaths by age and sex, number of adults in need of antiretroviral (ARV) treatment, PMTCT need and AIDS orphans, given an assumption about adult HIV prevalence. The DemProj projects the population for an entire country or region by age and sex, based on assumptions about fertility, mortality, and migration.

## Results

#### I. Declining Trends of Adult HIV Prevalence

- The adult HIV prevalence at national level has continued its steady decline from estimated level of 0.41% in 2000 through 0.36% in 2006 to 0.31% in 2009.
- All the high prevalence states show a declining trend in adult HIV prevalence. It has declined sharply in Tamil Nadu to reach 0.33% in 2009. However, the low prevalence states of Chandigarh, Orissa, Kerala, Jharkhand, Uttarakhand, Jammu & Kashmir, Arunachal Pradesh and Meghalaya show rising trends in adult HIV prevalence in the last four years.

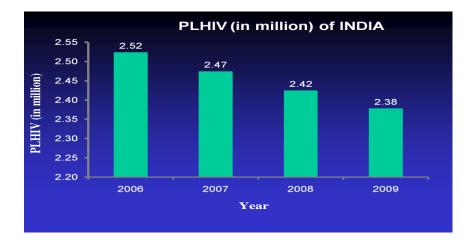


Among the states, Manipur has shown the highest estimated adult HIV prevalence of 1.40%, followed by Andhra Pradesh (0.90%), Mizoram (0.81%), Nagaland (0.78%), Karnataka (0.63%) and Maharashtra (0.55%). Besides these states, Goa, Chandigarh, Gujarat, Punjab and Tamil Nadu have shown estimated adult HIV prevalence greater than national prevalence (0.31%), while Delhi, Orissa, West Bengal, Chhattisgarh & Puducherry have

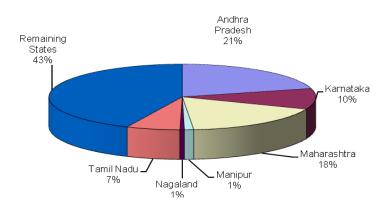
shown estimated adult HIV prevalence of 0.28-0.30%. All other states/UTs have lower levels of HIV.

## II People Living with HIV/AIDS (PLHA)

In 2008, 2.44 million people were estimated to be living with HIV within the uncertainty bounds of 1.97-3.09 millions. In 2009, approximately 2.39 million people were estimated to be living with HIV with uncertainty bounds 1.93-3.04 millions.



Among them 61% are male and 39% are female. By age the percent distribution of HIV infection is estimated at 83% are adults aged 15–49 years, 13% are over 50 years of age and 4% are children below the age of 15 years,. By distribution PLHIV of among states is shown in the figure given below:



States, 58% are high prevalence states,

The four high prevalence states of South India (Andhra Pradesh – 5 lakh, Maharashtra – 4.2 lakh, Karnataka – 2.5 lakh, Tamil Nadu – 1.5 lakh) account for 55% of all HIV infections in the country.

- West Bengal, Gujarat, Bihar and Uttar Pradesh are estimated to have more than 1 lakh PLHA each and together account for another 22% of HIV infections in India.
- The states of Punjab, Orissa, Rajasthan & Madhya Pradesh have 50,000 1 lakh HIV infections each and together account for another 12% of HIV infections. These states, in spite of low HIV prevalence, have large number of PLHA due to the large population size.

## 3. Infant and Child Mortality in India: Time Trend and Associated Factors Derived from Three Rounds of the National Family Health Survey

Date of initiation: November April 2008 Date of completion: August 2010 Study supported by: UNICEF, New Delhi

## BACKGROUND:

The package of reproductive and child health programme has emphasized reducing infant, child and maternal mortality in the population. But it cannot sustain unless we illustrate the devastating effect of high risk factors having scope of changing the scenario through interventions. It would be then desirable to examine the level of IMR and under-five mortality in various aforesaid high risk groups and the related factors slowing pace of decline in its level and trend during the recent past in India and its states.

Thus, the present study examined the level and trend of various components of under-five mortality including neo-natal, post-natal, infant mortality and mortality during 1-4 years in India and its major States.

The specific objectives of the study are as under:

- 1. To examine the time trend of neo-natal, post-neo-natal, infant and under-five mortality in India and its major States
- 2. To examine the time trends of coverage of child health services, and key child health practices in India and its major States;

- To study the factors associated with decline in neo-natal, post-neo-natal, infant and under-five mortality in India and its major States over three rounds of NFHS survey (socio-economic and service coverage and quality);
- 4. To analyze the inequities in child mortality and access to child health services, across economic and social groups

## Data and Methodology

Two sources of data were used – the Sample Registration System (SRS), 1978-2008 and three rounds of National Family Health Surveys (NFHS) conducted during 1992-93 (NFHS-1), 1998-99 (NFHS-2), and 2005-2006 (NFHS-3) in India.

Simple regression and ARIMA model of time series analysis were fitted to estimate early neonatal, neonatal, infant and under-five mortality using SRS observed mortality data form 1978-2008 and forecast for the future. The multivariate hazard regression analysis model has been used to assess the impact of maternal, socio-economic, living condition variables and exposure period on neonatal, post neonatal, toddler and child mortality in India and its states. Health inequalities among children are assessed by using WHO health inequality index and GINI co-efficient of inequality.

## Summary Findings:

The levels and trends of infant and child mortality:

The level of Infant Mortality Rate (IMR) declined from about 220 deaths per 1000 live-births per year at the time of India's Independence to about 130 during the 1960s and remained stable at the same level for a decade. It further declined from 127 infant deaths per 1000 live births in 1978 to 54 infant deaths per 1000 live births in 2008.

The highest decline was 22 infant deaths per 1000 live births in 1978–83 followed by 19 infant deaths per 1000 live births during 1988–93 and 12 infant deaths per 1000 live births during 1998-2003. The lowest decline of only 2 infant deaths per 1000 live births was observed during 1993–98.

The results show a marked drop in late neonatal (16 points), post-neonatal (21 points) and child mortality between 1981-86 and 1999-2005. Late neonatal post-neonatal and child mortality (age 1-4 years) reduced to around 50 percent.

Among major states, decline in neonatal (both early and late) was substantial in Haryana, Uttaranchal, Uttar-Pradesh, Bihar, Orissa, Karnataka, Kerala and Tamil Nadu. The percent decline in non-southern states was higher in states with relatively higher levels of neonatal mortality during 1981-86. Rates of decline were higher for child and toddler than infant and within infant it was higher for post-neonatal and early infant.

#### **Projection of Infant and Child Mortality**

- 1. Analysis based on Autoregressive integrated moving averages (ARIMA) model shows that without further intervention, India will not be able to achieve the set target of an U5MR of less than 39 in MDG4 goal by 2015.
- Only six states, namely, Kerala and Tamil Nadu in South, Maharashtra in West, Punjab and Himachal Pradesh in North and West Bengal in East will be able to achieve the reduction of the U5MR below 39 by 2015.

## Effects of socio-economic, demographic and environmental factors

It is found that mortality is lower in urban areas compared to rural areas. Mother's education emerged as an important factor associated with under-five mortality rate and also has an effect on post-neonatal mortality rate. The children in SC and ST households experienced much higher neonatal mortality than other children for India and majority of the states excepting Jammu & Kashmir, Orissa, Assam, Gujarat and, Tamil Nadu. There is a inverse relationship between neonatal, post-neonatal and child mortality with standard of living index.

Risk of mortality during first month and between ages (0, 1) and [1, 12) months (and hence during infancy) are highest among first born children. The study findings indicated that mortality before age five could be reduced substantially if women wait until they attain age 20s to begin childbearing. Any birth within two years before the index birth is linked with considerable excess mortality for the index child. During neonatal period male mortality in India is higher than the female mortality. During the post-neonatal period, however, female mortality is higher than male mortality. Females are at the greatest disadvantage at ages 1-4 years, when their risk of dying exceeds that of males by more than 40 percent. Neonatal mortality is found to be higher among children of obese and anemic women than their counter parts. However, the post-neonatal mortality is lower among children of obese mothers.

## **Health Inequality:**

As per the WHO inequality index and Gini concentration index of child survival, Tamil Nadu has found as least unequal in the distribution of child survival while Madhya Pradesh is placed as the most unequal in terms of child survival inequalities. Other EAG states (Rajasthan, Jharkhand, Chhattisgarh, Uttar Pradesh and Assam) estimated inequality index are also high.

#### 4. National Sample Survey for Assessment of Disease Burden of Leprosy (2010-2011)

Date of Initiation: January 2010

Date of Completion: April 2010.

#### Background:

The findings of the pilot study conducted during June2009 to Dec 2009 were presented on 16 December 2009 among the experts of leprosy and statisticians. It was agreed by the experts and the Ministry of Health and Family Welfare to adopt inverse sampling at the National level with more than one random start to reduce the false negatives commonly encountered in the conventional sampling. MOHFW commissioned this Institute to develop the survey methodology at the National level for the assessment of disease burden of leprosy.

Specific objectives of the study were the refer set as follows:

To develop the survey methodology document in detail to estimate the disease burden of leprosy at state level and at National level.

To estimate the disease burden of leprosy at State level and at National level.

## Coverage

Out of 630 districts of India, a sample of 130 districts; rural as well as urban were to be covered of which 93 districts were from rural areas and 37 from urban areas. The allocation of these districts to states was done on the basis of number of districts in the state and its Annual New Case Detection Rate (ANCDR). Two blocks, one with high endemicity and other with low endemicity were selected from the selected districts. The total coverage at the national level was about 2.43 crore.

#### Methodology

The sampling methodology using inverse sampling was discussed and adopted during Jan-Feb 2010. Three stage sampling design was suggested for rural population. At the first stage, districts were selected, at the second stage blocks were selected from the selected districts and at the third stage villages were selected from the selected blocks. Thus, district became the primary sampling unit and the village will be the ultimate unit of selection. Each selected block was suggested to be divided into four segments and thereby have four random starts. From each segment, four new cases were to be identified in the high endemic block while three new cases were to be covered from the low endemic block to get the representative sample of the blocks. Sampling would continue till the desired number of new cases will be identified. For urban areas, separate sampling design was adopted. Cities were divided into four categories; Metros, other 4 million population, 1-4 million population and <1 million population. There would be ten random starts in metros while six random starts in other cities to have a representative sample of urban population. Three new cases were to be covered in metros from each random start while five new cases were to be found from each random start from other cities. Sampling would continue till the desired number of new cases would be detected.

**OUTCOME**: The institute was responsible for developing the detailed document for survey methodology; the submitted to MOHFW for further work to be done by JALMA. The Institute participated in the training of trainers (TOT) for the take off the survey.

**TOT:** A TOT for all the states was conducted during 9-16<sup>th</sup> April 2010 at NIHFW and NIMS participated as a resource person for TOT

Status: Field work and data entry work is going on by JALMA.

## 5. Monitoring and data management of the study for the evaluation of the Viremia in healthy adults after single dose of vaccination of JE SA 14-14-2

Date of Initiation: March 2007

Date of Completion: Dec 2010.

#### Background

Japanese encephalitis (JE) is endemic in many regions of India, where large scale outbreaks have occurred. After a massive outbreak of JE in eastern Uttar Pradesh, Government of India introduced an attenuated JE vaccine SA 14-14-2 in India. Attenuated JE virus vaccines have always been preferred over killed vaccines as they mimic the exact grade of immune response that is required for protection from the wild type. Clinical trials and large-scale field studies in China have demonstrated the safety, immunogenicity and effectiveness of the live-attenuated Japanese encephalitis SA14-14-2 vaccine <sup>6-8</sup>. It is necessary to generate data in the Indian population on safety, seroconversion and viraemia. A study of viraemia following vaccination with the SA14-14-2 vaccine itself, as is proposed here, is needed to facilitate the contemplated extended registration of the vaccine in India.

As the primary objective of this study is to demonstrate that under normal conditions a human subject receiving the live attenuated Japanese encephalitis vaccine SA 14-14-2 at the dose of 5.7 log PFU, presence of viraemia in the blood is low and transient, it is therefore clear that increasing the dosage of virus injected will not increase significantly the presence of the virus in the blood

The study site was chosen on the basis of proximity to the reference virology laboratory with extensive experience in virological and serological assays and being in an area without yearly endemic transmission of JE virus.

#### Primary objective:

 To determine levels of viraemia after administration of a single dose of live attenuated SA14-14-2 JE vaccine in adult subjects between days 1-8 and day 15 post vaccination.

#### Methodology

An open label, uncontrolled, single center study, in adults of 18-40 years was planned.

Eligible subjects were vaccinated with a single dose of live attenuated JE vaccine and subsequently evaluated for viraemia between days 1 to 8 and day 15. Subjects were evaluated

for safety for one year following vaccination; solicited adverse events were recorded from day 1 to 8; safety laboratory assessment was done on day 15, unsolicited adverse events were recorded from the day of vaccination till 30 days and serious adverse events were recorded for one year. Subjects were tested for seroconversion on day 30, 6 months and one year following the vaccination. A total of 35 subjects were vaccinated. Prospective subjects were screened until a sufficient number of eligible subjects were identified. NIMS was entrusted to do the data management and analysis for the trial.

#### Results

The major aim of the study was to see whether the JE attenuated vaccine would give rise to sufficient viremia capable of getting transmitted in the ecology in endemic regions. As no viremia was detected in any subject this apprehension is cleared. Most of the subjects showed seroconversion after the vaccination, indicating that vaccine virus did multiply in the body to an extent sufficient to immunize the subject. Percentage of seroconverters is similar to the seroconversion rates seen in a parallel study. Decreased antibody response and seropositivity after one year of administration of vaccine is expected because as such exposure to JE is minimal if not negative in this region. It might be interesting to see the course of IgM response in these subjects following immunization with JE vaccine.

## (b) Ongoing Studies

#### 1. End Line Evaluation of Home-Based Management of Young Infants

Date of initiation : Jan 2011

Date of completion : April 2011

Funding Agency : ICMR

#### Background and objectives

A community-based effectiveness trial to provide package of home based care for neonates and young infants delivered by a community-based worker at multiple rural sites for reducing neonatal mortality with support from the existing health system was carried out. The project was carried out in five districts namely Barabanki (Uttar Pradesh), Cuttack (Orissa), Patna (Bihar), Rajsamand (Rajasthan), and Yavatmal (Maharashtra) located in the north, north east,

central and western parts of India respectively. The study was implemented by nongovernmental organizations at two sites (Rajsamand and Cuttack); the rest three sites were governmental sites. The study districts were selected in consultation with the state and district health authorities based on the neonatal mortality rate (more than 40 per 1000 live births) and home delivery rates (more than 70%).

Health care system at these sites consisted of a district hospital, community health centers, primary health centers and sub centers. The services are provided by medical officers (medical and/ indigenous system of medicine), nurses, and auxiliary nurse midwives (ANM) at the health facilities, and by ANM and *Anganwadi* workers (AWW) at the community level. An ANM caters to a population of 5000-7000, while the AWW serves approximately 1000 population. Antenatal care, tetanus toxoid immunization, postnatal home visits are provided by ANMs. Anganwadi Workers are responsible for supplementary nutrition to pregnant and lactating women and preschool children and non formal education to preschool children.

The study began in January 2003 with baseline survey. Population / villages covered by each PHC were taken as a cluster. The baseline survey collected information on truncated pregnancy history in the reproductive age along with neonatal deaths and still births for the past one year (2002-03).

Primary outcome measures were neonatal mortality rate (deaths 0-27 days/ 1000 live births) (NMR) and young infant mortality rate (deaths 0-59 days/ 1000 live births) (YIMR). Secondary outcome measures were early neonatal mortality rate (neonatal deaths under 0-6 days/ 1000 live births) (ENMR), late neonatal mortality rate (deaths 7-27 days/ 1000 live births) (LNMR), infant mortality rate (deaths 0-364 days/ 1000 live births) (IMR), still birth rate (SBR) and perinatal mortality rate. ICMR commissioned the end-line in 2010 by conducting cross sectional surveys following comparable methods and tools as in baseline with complete enumeration of households in the clusters/PHCs. In the endline information were collected on births & deaths and other key demographic indicators. Inclusion criterion was all births in the village, or outside whose mother returned within 2 months of the date of delivery of each cluster/PHC. Analysis was done on intention to treat basis on pooled data from five centers with cluster adjustments as per approved plan of analysis. During end-line survey information was collected for reference period covering two years (Holi 2008 - Holi 2010) which corresponded to one year when active intervention was ongoing and the year with no active intervention.

30

Quality control measures included validation of data by filling separate set of forms by supervisors. In addition to agency's quality assurance activities by the survey team / supervisors, observation of interviews, validation of births and deaths on a sample basis were also carried by independent experts. Each household was given a unique identification number. The survey ensured a 5% sample check of all households' data through back checks, spot checks and re-interviews.

The end-line survey gathered information for preceding two years, viz. for the period 2008-10 (Holi festival in March 2008 – Holi festival in March 2010). Data were separately analyzed for 2008-09 and 2009-10 to gauge the impact at the 'peak' of intervention phase for the former, and the post-study residual effect of the intervention for the latter.

Accordingly, estimation of outcome measures (early neonatal, late neonatal, neonatal, post neonatal, young infant and infant mortality) was made in the form of proportions of live births experiencing mortality for two reference periods (Holi 2008 - Holi 2009 and Holi 2009 – Holi 2010) by arm. The cluster adjusted proportions were estimated arm wise. The co variates considered at the individual level were caste, education, place of delivery, ANC and at cluster (village ) level were access to PHC, access to CHC, distance to district hospital (<25 km.), presence of private clinic, ASHA and JSY. The report writing is in progress.

## 2. The Prevention of HIV / STI s among married Women in Urban India

Date of initiation: July, 2008

Funding Agency: International Centre for Research on Women, New Delhi

## Background and objectives

This project seeks to develop and evaluate a culturally appropriate, health facility-based intervention to promote primary prevention of HIV and other sexually transmitted infections (HIV/STIs) among married women, ages 18-40, living in an economically marginal community in Mumbai (Bombay), India.

The great majority of women in the world are exposed to HIV/STI risk not through their own agency, but because of the behavior of their spouses. The intent of this study is to develop an approach that will reduce risk among vulnerable married women in these communities and thus serve as a model for India as well as for other vulnerable women in developing and developed countries. This project seeks to respond to the need to develop effective approaches to the

global risk of husband to wife transmission of HIV and other STIs. This project utilizes an approach to HIV/STI risk reduction among married women that centers on culturally-based gynecological and related health symptoms (e.g. safed pani, kamjori, tenshun) that women feel more comfortable discussing and presenting for treatment.

In this context, ICRW is working in collaboration with Indian governments, University of Connecticut Health Centre, USA; Institute for Community Research, Connecticut, USA; University Laval, Canada; Tulane University, USA; London school of Hygiene and Tropical Medicine, UK; Population Council, New Delhi; Tata Institute of Social Science, Mumbai; CORO for Literacy, Mumbai; TN Medical College, Mumbai and National Institute of Medical Statistics, New Delhi.

This project seeks to develop and evaluate a culturally appropriate, health facility-based intervention to promote primary prevention of HIV and other sexually transmitted infections (HIV/STIs) among married women, ages 18-40, living in an economically marginal community.

- 1. Conduct formative qualitative research on the stakeholders and institutions involved in women's health including; women in the context of the family, women as patients, husbands and their relationship to the health of their wives, and the nature of health care for women in the community;
- 2. Implement, based on the formative research, the interventions of Enhanced Care and Couples' Intervention in an existing public health facility in the study community to reduce women's HIV/STI risk within marriage
- 3. Test the efficacy of the interventions, through a randomized clinical trial (RCT), to reduce the risk of HIV/STI transmission, to reduce STIs and women's gynaecological and related symptoms and to improve women's life situation

Target population

Economically marginal community in Mumbai, India.

## Methodology

The project will be organized into three phases namely; Phase I: formative phase, Phase 2: Implementation phase and Phase 3: Evaluation Phase :

<u>Phase I (Year 1)</u> will involve formative data collection with health and other service providers, married women and men, and married couples; analysis of these data; and finalization of the intervention design and evaluative instruments.

<u>Phase II (Years 2-4)</u> will involve the implementation of interventions in which married women seeking treatment at the Shivajinagar Urban Health Center (UHC) and meet the inclusion criteria will be randomly assigned to one of four conditions: Enhanced Care only; Enhanced Care plus Couples' Intervention; Standard Care only; and Standard Care plus Couples' Intervention in the governmental Urban Health Center in the study community.

<u>Phase III (Years 2-5)</u> will evaluate the acceptability, social validity, integrity, sustainability, institutionalization and impact of the interventions on married women, using qualitative interview and observational methods and a quantitative interview at baseline with follow-up at three months and one year and STI testing at baseline and one year follow-up.

Progress of the study (with photographs)

- 1. Total Patients flow at WHC 7034
- 2. Total New Patients -3459 (49%)
- 3. Eligible for RCT 1155(33%)
- 4. Recruited 644(56%)
  - IC only- 156
  - CI only- 157
  - IC+CI 164
  - No Intervention- 167
- 5. Total Follow-up WSS (Women's Structured Survey)
  - Six month- 352
  - One year-148
- Total IC (Individual Counseling) sessions 655
  Total CI (Couple Intervention) sessions 194

## 3. Clinical Trials Registry- India

Status: Ongoing Studies

Period: Started April 2006- March 2009 extended up to March 2011

Background

Clinical trials hold enormous potential for benefiting patients, improving therapeutic regimens and ensuring advancement in medical practice that is evidence based. However, the data and reports of various trials are often difficult to find and in some cases do not even exist as many trials are abandoned or not published due to "negative" or equivocal results. This tendency for availability of only selective information from the myriad clinical trials conducted is not commensurate with the practice of "evidence-based medicine".

Today, world over, a need has been felt on the imperative for transparency, accountability and accessibility in order to re-establish public trust in clinical trial data. This is possible only if all clinical trials conducted are publicly declared and identifiable and a minimum set of information of all clinical trials is freely available to physicians, health researchers, academicians, pharmaceutical industries as well as the common man.

In keeping with this mandate, the WHO has set up a global platform, the International Clinical Trial Registry Platform (ICTRP) to publicly declare and identify clinical trials, by disclosing 20 (plus 1) key details of the trial at or before the enrollment of the first patient (Table 1). This move is supported by the International Committee of Medical Journal Editors.

Table 1

## Items of the WHO Trial Registration Data Set

- 1. UTRN
- 2. Primary Register and Trial ID #
- 3. Date of Registration in Primary Register
- 4. Title of study
- 5. Scientific Title of Study, (also give trial acronym, if any)
- 6. Secondary IDs, if any
- 7. Contact Person (Scientific Query)
- 8. Contact Person (Public Query)
- 9. Funding Source/s
- 10. Primary Sponsor
- 11. Secondary Sponsor
- 12. Date of first enrollment
- 13. Target sample size
- 14. Health Condition/Problem studied
- 15. Intervention and Comparator agent
- 16. Key inclusion/Exclusion Criteria
- 17. Primary Outcome/s
- 18. Secondary Outcome/s
- 19. Countries of Recruitment
- 20. Status of Trial
- 21. Study Type

In addition to the above items, the CTRI has added a few more data set items to be declared at the time of trial registration. These additional data set points unique to the CTRI are:

- 1. Principal Investigator's Name and Address
- 2. Name of Ethics Committee and approval status \*
- 3. Regulatory Clearance obtained from DCGI \*
- 4. Estimated duration of trial
- 5. Site/s of study
- 6. Phase of Trial \*
- 7. Brief Summary

- 8. Method of generating randomization sequence
- 9. Method of allocation concealment
- 10. Blinding and masking

The CTRI (<u>www.ctri.in</u>) is an online platform for the registration of all clinical trials being conducted in India on health products including drugs, devices, vaccines, herbal drugs etc. from where with the click of a button, key information of all clinical trials conducted in India, will be available to all as well as neighboring countries which do not have such registries of their own. Although the mandate is for the prospective registration of trials, i.e., before the enrollment of the first patient in the trial, currently in the CTRI, ongoing, completed trials are also being registered. Currently registration of clinical trials in CTRI is voluntary and is free of cost.

## Goal and objectives of the registry

The specific goal of setting up a clinical trial registry is to ensure that all clinical trials conducted in India are registered and publicly declared and identifiable and a minimum set of information of all clinical trials are freely available to physicians, health researchers, academicians, pharmaceutical industries as well as to the common man which will increase public trust in the conduct of clinical research.

The objectives of the project are to:

- 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

## Methodology

A registry for clinical trials, Clinical Trials Registry –India (CTRI) was set up by the ICMR's National Institute of Medical Statistics (NIMS). A software application is hosted on the internet. The Registry is operational; anybody who wishes to conduct a clinical trial in the country would have to declare all items of the CTRI Trial Registration Data Set. The Registry collects information on all prospective clinical trials to be undertaken in India and make this information available to the public.

One of the major functions of the CTRI is to ensure that trials are not registered more than once in the registry (deduplication). Mechanisms are to be put in place to have an effective deduplication process at CTRI.

#### Coverage

Initially, the registry included data of clinical trials conducted at the 29 ICMR institutes and a large number of ICMR Regional Research and Health Centers and all the clinical trials funded by ICMR, and subsequently includes clinical trials being conducted by DST, DBT, CSIR, Health Ministry, NACO, AYUSH and other funding agencies. In addition, data of clinical trials will also be accrued through drug Regulatory Authorities as well as from government-aided as well as private institutions and hospitals. Currently registration of trials is open globally; all those who are interesting in registering the trials can register the trials in CTRI.

During the current year the new version of CTRI software application is developed by assigning this job to NIC. Key new features incorporated in the new software are as below:

#### Audit trail

Audit trail in relation to trial registration is the ability to monitor changes made to the trial registration or tracking the data set after the initial registration. The up-graded software would be able to track, capture and display all changes made in the trial after registration. These changes will be visible to public also.

#### Advance Search Facility

The up-graded CTRI software would streamline trial search facility in a layered fashion with multiple parameters together. Public can search in detail without obtaining the user name and pass word.

## **Other features**

Facility to send electronic messages to all trial registrant

Automated Deduplication (to ensure that a trial is not registered more than once in the CTRI)

Trial flagging of Retrospective and prospective trial registration Trials registered after the recruitment started will be flagged to enable us to identified about the ongoing trials. Facility to upload EC/DCGI approvals from site, which were earlier being done through gmail Wherever feasible drop down lists have been incorporated to simplify data entry and improve uniformity of data uploaded and data mining.

Observational/Post marketing surveillance/BA/BE studies could also be registered and identified (but data set items to remain common for all types of trials)

Categorization of Primary sponsor (Pharmaceutical industry, government medical college etc and trial type interventional (drugs, vaccine device etc) observational etc. incorporated to enable us to produce report in better manner. Earlier manually trials were identifying for these groups.

Facility for multiple level accesses at the ADMINISTRATOR level as well as Ministry and DCGI level

- PI accreditation with code (not for public display)
- Adverse event details
- Patient insurance/compensation YES/NO (pull down menu)

Enhanced website security by using password encryption and CAPTCHA incorporated.

Improved ADMIN page organization and trial tracking system incorporated.

User-friendly and organized screens for uploading trial details with 8 different sections incorporated.

Single button option for creating XML file for data transfer to WHO each month is also incorporated for smooth functioning of CTRI.

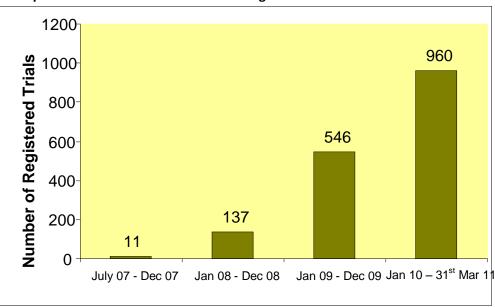
#### **Technical Progress**

Initially after the launch only 11 trials were registered by the end of December 2007. All these trials were registered before the recruitment of first patient. To increase the trial registration various dissemination workshops were organized in the past resulting in direct impact on trial registration. During this year on 25<sup>th</sup> June 2010 one major dissemination workshop was organized at Smt. NHK Medical College, Ahmadabad. This workshop was funded by WHO. More than 100 participants participated in the workshop. Workshop was interactive and there were many queries raised by the participants on various issues like ethics, regulatory affairs,

insurance, and registration process. . During 2009, w.e.f 15<sup>th</sup> June 2009, DCGI made the trial registration mandatory by issuing the notification. The awareness regarding Registry has gained momentum as evidenced by the number of hits on the CTRI site, which has crossed more than 1,35,000 marks till 7<sup>th</sup> March 2011, more than 3000 users had been registered. The registration of trials gains momentum and rose to 1650 till 7<sup>th</sup> March 2011 as compared to 806 trials till 31<sup>st</sup> December 2010. (Graph-I) Also, the impact of DCGI notification further gains momentum in registration of clinical trials, resulting in 580 trials from 16<sup>th</sup> June 2009 to till 31st March 2010 as compared to 298 trials before the implementation of notification. (Graph-II) About 95 trials are pending with the respective registrants for various modifications/clarifications, while 54 trials are pending with the Administrator awaiting EC/DCGI approval documents. In addition the awareness in the public has increased and several mails have been received requesting for possible participation in the trials.

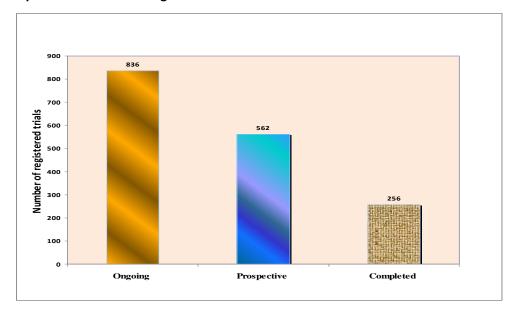
Another important milestone for the CTRI is that since December 2008, trials registered in the CTRI are also searchable from the WHO's global search portal, the ICTRP.

**Findings:** A total of 1650 trials were registered as on 31<sup>st</sup> March 2011. Year wise status of registered trials is shown in Graph-I

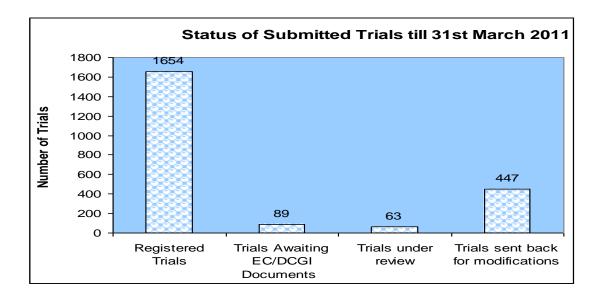


Graph-I Year wise distribution of trials registration till 31<sup>st</sup> March 2011

**Graph II Distribution of registered trials** 



Graph III Status of Trials till 31st March 2011.



4. Estimation of Maternal Mortality Ratio in Orissa and Rajasthan State.

#### Date of Initiation August 2010

Funded : Task Force of ICMR

#### *Duration of study*: 18 Months w.e.f 1<sup>st</sup> August 2010.

This study was approved and sanctioned under TaskForce of ICMR during 2010. The objectives of the study is to estimate maternal mortality ratio for Orissa and Rajasthan State. A sample of 28 PHCs in Orissa state and 17 PHCs from Rajasthan state are to be covered under the study. Snowball sampling technique to be adopted for capturing the maternal deaths in the PHCs area. Funds for the study were received on 3<sup>rd</sup> August 2010. The study initiated just after the funds were received and one SRF was appointed under the study.

#### Progress of the Study From 1<sup>st</sup> August 2010 to 31<sup>st</sup> March 2011

During the period under report questionnaires were developed for collecting the data on number of births and maternal deaths in Orissa and Rajasthan. The questionnaires were approved in the Expert group meeting on held on 16<sup>th</sup> September 2010.

The questionnaires were printed to start the field work.

Field work was initiated from 10<sup>th</sup> October 2010 in Bharatpur district of Rajasthan.

Field staffs were engaged to collect the data and the staffs were trained by the PI in the field for collection of data.

The field work in Jaipur district was initiated from 21<sup>st</sup> November 2010.

The field work in both the districts is completed.

The data of both the district was analyzed. The study obtained 6 maternal deaths in Bharatpur districts while 8 maternal deaths were obtained in Jaipur district.

# III Invited Talks in Conferences /Training/ Seminars / Workshops

Date	Lecture topic	Conferences /Training/ Seminars / Workshops
Dr. Arvind Pandey		
July 14,2010	Vital Statistics	At National Academy of Statistical Administration (NASA) at Greater NOIDA.
Dec.29	Official Statistics	Training Course of National Academy of Statistical Administration (NASA) at Greater NOIDA
Feb.24,2011	Chaired the session	Technical session on Rural Health Status in India, International Seminar on Technology, Energy and Sustainable Rural Environment" at BHU, Varanasi.
March 9, 2011	Method of estimating abortion in India	Workshop on Protecting Women's Health, Advancing Women's Reproductive rights organized by Ipas at New Delhi.
March 11-13	Small Are Estimation	Resource person in the workshop on "Small Area Estimation: Theory & Application in Health Sciences" at Gauhati University, Gauhati.
March 29-31	HIV Epidemiology	HIV Sentinal Surveillance Review for Regional Universal Access Stocktaking Consultation on behalf of UNAIDS Regional Support Team for Asia-Pacific (RST) to discuss progress made on Universal Access and a way forward.
15 <sup>th</sup> May 2010	Research Ethics	Delivered lectures on in a training programme on 'Research Ethics' to Ph.D students of IP university, Delhi.
25 <sup>th</sup> June 2010		Resource person in WHO funded Dissemination Workshop of CTRI at Ahmedabad.
11 August, 2010	Estimation of Malaria morbidity	Informal Consultative Meeting on Standard Protocol Development for Estimating Malaria Disease burden in South East Asia (SEA) Region at WHO SEARO, IP Estate, New Delhi
16-18 Jan 2011	Research methodology	Lecture on Research methodology workshop conducted by department of Health Research at Government Medical College Chandigarh.

20 January	Statistical Methods	Workshop on statistical methods and
		computer softwares at Institute of Cytology and Preventive Oncology
25-26 <sup>th</sup> Feb 2011	Clinical Trials Registration	Invited as a resource person a Training workshop held at NIOH, Ahmadabad
24-28 February, 2011	Clincal Trial Registry	Training Workshop on Clinical Trial and Statistical Computing at National Institute of Occupational Health(NIOH), Ahmadabad
26 March 2011	application of statistics in medical research and study designs at UGC sponsored seminar on Recent Advances in sampling	Talk at Department of Statistics MD University Rohtak.
Dr. R.J.Yadav		
July 26, 2010.	Monitoring and evaluation in Social developmental Programme	officials of NGOs of different states at NIPCED, Delhi
September 24-25, 2010	Health Management Information system	state officials of Bihar as WHO trainees on at RMRIMS, Patna.
Dr. Abha Rani Aggarwal	1	
9-16 <sup>th</sup> April 2010	Sampling Methodology for National Level Study for estimation of Disease Burden of Leprosy	Attended and participated as a resource person in the TOT for National Study of Leprosy held at NIHFW.
15 <sup>th</sup> May 2010	"Human subjects" and "Research and Researchers"	Delivered lectures on in a training programme on 'Research Ethics' to Ph.D students of IP university, Delhi.
30-31 <sup>st</sup> July	CONSORT Statement for Results Reporting and Registration of Clinical Trials	Resource person in Training workshop "Research Methodology and Clinical Research by Amritha Medical college and Hospital, Kochi.
16 <sup>th</sup> -21 <sup>th</sup> August 2010	sampling techniques on 16 <sup>th</sup> August	Resource person by Institute of Bioresources and sustainable Development, Manipur for the training workshop on "Basic Statistics and its Application".
20 <sup>th</sup> August 2010	Determination of Sample Size in Clinical Trials.	Resource person in a national workshop on research methodologist at AIIMS.
18 <sup>th</sup> -19 <sup>th</sup> September 2010	Design and Conduct of clinical trials	Resource person in "National seminar on research methodology in ayurved- 2010" at occasion of golden jubilee year of Maharashtra State, Aurvidya

		prasarak mandal's, Ayurved
		mahavidyalaya, Sion, Mumbai 22
21-22 <sup>nd</sup> January 2011	Clinical Trials Registry- India	Resource in Training workshop "Research Methodology in Clinical Research" at Sharda University, NOIDA.
25-26 <sup>th</sup> Feb 2011	Clinical Trials Registration	Invited as a resource person a Training workshop held at NIOH, Ahmadabad
11 <sup>th</sup> March 2011		Resource person in a meeting for an "Informal consultation on clinical trials in children registered in the Clinical Trials Registry- India" at the hotel Annamalai, Puducherry.
Dr. H.K.Chaturvedi	·	
26-27 February, 2010	Biostatistics in Biomedical Research – Some Gaps and Issues	National Seminar on Biostatistics at Department of Statistics, Dibrugarh University, Dibrugarh, Assam
11 August, 2010	Application of Bayesian Geo-statistical Model for estimation of Malaria morbidity	Informal Consultative Meeting on Standard Protocol Development for Estimating Malaria Disease burden in South East Asia (SEA) Region at WHO SEARO, IP Estate, New Delhi
18 November, 2010	Applications in Medical/Health Research	Induction Training Programme" for Subordinate Statistical Services (SSS at National Academy of Statistical Administration, G.NOIDA
24-28 February, 2011	Clincal Trial Design, Phases of Clinical Trails', 'Randomization	Training Workshop on Clinical Trial and Statistical Computing at National Institute of Occupational Health(NIOH), Ahmadabad
Dr. Tulsi Adhikari		
January 20	Survival Analysis and SPSS	Workshop on statistical methods and computer softwares at Institute of Cytology and Preventive Oncology
Dec 21-22 2010	Types of studies – Cohort and case-control	Workshop on "Biostatistics and Official Statistics" in Collaboration with National Academy of Statistical Administration (NASA) Department of Statistics, Panjab University, Chandigarh.
Dr. Atul Juneja		

11-14 April2010	Sampling methods in health research and interventional studies	Delivered talks at ICMR sponsored workshop on Research methodology at Tanda Medical College Kangra Himachal Pradesh
24 &26 May 2010	Sampling methods in medical research and logistic regression analysis	Delivered lectures at workshop at NIHFW.
7 July 2010	Research Methods in Medical Research	Delivered talk for the senior faculty of Statistics of different Universities in India at National Academy of Statistcal Administration(NASA), Greater NOIDA.
27 July 2010	Compling mothods	Delivered a talk at NIDCCD, New Delhi
27 July 2010 4-5 August 2010	Sampling methods	Delivered a talk at NIPCCD, New Delhi. Faculty for the refresher course for the first year post graduates of Lady Hardinge Medical College.
27 August 2010		Resource person in the workshop on Sample size estimation in Clinical Trials at PGI, Chandigarh
27 Sept,2010	Statistical Methods in Biomedical Research	Resource person for the workshop on Research Methodology at Dayanand Medical College Ludhaina.
22 Dec 2010	Clinical Trials at workshop on Biostatistics	Invited talk at Department of Statistics at Panjab University Chandigarh.
16-18 Jan 2011	Data processing and sample size determination of sample size	Lecture on Research methodology workshop conducted by department of Health Research at Government Medical College Chandigarh.
21 Jan 2011	Pit falls of Statistics	Delivered a lecture at workshop on Statistical Computing at ICPO (ICMR), NOIDA.
4 Febr.2011	Standardisation of Survey Tool and issues on sample size	Deliverd lectures at DHR sponsored workshop for Scientist of Human Reproduction Research Centres in India conducted at NIHFW, New Delhi.
25-27 Feb 2011	Ethics in Clinical Trials and sample size	Delivered talks at workshop on Clinical Trials.conducted by NIMS at NIOH Ahmedabad.
16-18 March 2011	Design of studies and sample size determination and conducted sessions on	Delivered lectures at a ICMR- NIHFW collaborative workshop on Health System Research at UP Rural Institute of Medical Sciences Safai-Etawah.

26 March 2011	drafting research proposals application of statistics in medical research and study designs at UGC sponsored seminar on Recent Advances in sampling	Talk at Department of Statistics MD University Rohtak.
Mr. Jiten		
18-21 August, 2010	statistical computation	"Training workshop on basic statistics and it's application" held at IBSD, Imphal, 16-21 August, 2010.

# IV Scientific Meetings/Conferences/ Seminars/ Workshops attended /Field visits

Date	Name of the Conferences /Training/ Seminars / Workshop	Name of Scientists
April 12,2010	On completion of 50 years of National Rural Health Mission (NRHM) of Ministry of H&FW, Nirman Bhawan, New Delhi.	Dr Arvind Pandey
April 15-17, 2010	Poster entitled "Application of Increment Decrement Life Tables to Analyze Cause of Death Elimination in Life Expectancy in Selected States of India" presented at the 2010 Annual Meeting of the Population Association of America (PAA), Dallas, Texas, USA.	Mr. B.K. Gulati
April 19,2010	Second Evaluation Advisory Group (EAG) Meeting for the MLE-URHI studies at International Centre for Research on Women (ICRW), New Delhi.	Dr Arvind Pandey
April 22,2010	Brainstorming Meeting of experts for initiating Sectoral Reviews for Bihar Population and Development Policy at UNFPA Office, Lodi Estate, New Delhi.	Dr Arvind Pandey
April 22,2010	Meeting at DPS society for consultation on development of Health card	Dr.Tulsi Adhikari, Dr Atul Juneja
April 26,2010	Meeting of Management and Systems Division Council (MSDC) at Bureau of Indian Standards, Manak Bhawan, New Delhi.	Dr R.Y.Yadav
April 29,2010	Ethics Committee Meeting of Futures Group at India International Centre, New Delhi.	Dr Arvind Pandey
May 03,2010	Meeting at IP University to discuss the teaching plan for course on research ethics for Ph.D program	Dr. Atul Juneja
May 10-15, 2010	Visited Cuttack for the supervision of the data entry work on study on home based management of young infants.	Dr. Atul Juneja
May 21, 2010	PRC meeting for the projects for the North Eastern Region at ICMR	Dr. Atul Juneja
May 17-18, 1010	Symposium on Ethics issues related to Sexual and Reproductive Health Research organized by ICMR & Dept. of Gynecology & Obstetrics, AIIMS.	Dr Arvind Pandey
May 24-29, 2010	Workshop on Epidemiological & Bio-statistical Methods using R software, NIHFW, New Delhi	Mr.Jiten Kh Kumar

May 28, 2010	Attended the meeting to discuss the status of endline survey for the project "Home Based Management of Young Infants"	Dr. Anil Kumar, Dr. Tulsi Adhikari
June 1, 2010	Attended the presentation of Scopus-World's largest abstract and indexing database	Dr. Anil Kumar
June 9, 1010	Technical Advisory Committee (TAC) of District Level Household Survey (DLHS) to discuss issues relating to the survey design and pooling of DLHS-4 and Annual Health Survey (AHS) at Nirman Bhavan, New Delhi.	Dr Arvind Pandey
June 11, 2011	Dissemination Workshop on Integrated Behavioral and Biological Assessment: National Highways (IBBA-NH) round 2 at India Habitate Centre, New Delhi.	Dr Arvind Pandey, Mr.B.K.Gulati
June 14-18, 2010	Training programme on "Management & Leadership Development" at Centre for Disaster Management, Lal Bahadur Shastri National Academy of Administration, Mussoorie	Dr. Abha Rani Aggarwal
June 17, 2010	Meeting on development of Health card at for students of DPS School at DPS Society	Dr. Tulsi Adhikari, Dr. Atul Juneja
June 25, 2011	CTRI Dissemination Workshop of WHO/NIMS at B.J. Medical College, Ahmedabad	Dr Arvind Pandey
June 27, 1010	First Meeting of the Advisory Group Members for the Alcohol Conference at ICRW, New Delhi.	Dr Arvind Pandey
June 28, 1010	Meeting of community based study on the prevalence of clinical sexually transmitted diseases, NACO, New Delhi.	Dr Arvind Pandey
July 3, 2010	Submitted question paper on Research ethics for IP university	Dr. Atul Juneja
July 23- 24,2010	Dissemination Meeting of Shaping demand and Practices to improve Reproductive, Maternal newborn and child health& Nutrition in the Northern India at India Habitat centre, New Delhi organized by UNFPA.	Dr R.Y.Yadav
July 30,2010	Project Review Committee of RHN division of ICMR.	Dr R.Y.Yadav
July 30, 1010	Workshop on 'Gender Mainstreaming' in connection with the next phase of Census 2011 – Population Enumeration organized by the Office of the Registrar General, Min. of Home Affairs at Mantra Conference Room of the Park Hotel, New Delhi.	Dr Arvind Pandey
Aug 09, 1010	Sub Committee of Technical Advisory Committee (TAC) of District Level Household survey (DLHS-4) at Min. of H&FW, Nirman Bhavan, New Delhi.	Dr Arvind Pandey
August 11,2010	Informal Consultation on Development of Standard Protocol for Estimating Malaria Disease Burden in SEA Region held at WHO SEARO, New Delhi.	Dr Arvind Pandey
August 17,2010	Chairman in the Meeting of the Selection Committee for the post of Monitoring and Evaluation Officer at NACO Office, New Delhi.	Dr Arvind Pandey
Aug 19,2010	Meeting of Management and Systems Division 3:3 at Bureau of Indian Standards, Manak Bhawan, New Delhi.	Dr R.Y.Yadav
Aug 26,2010	Meeting of Management and systems Division Council (MSDC) at Bureau of Indian Standards, Manak Bhawan, New Delhi.	Dr R.Y.Yadav
August 30-31, 2010	Visited IPU University for evaluating the papers of the final examination on Research Ethics.	Dr. Atul Juneja
1	'Global Maternal Health Conference organized by Public Health Foundation	Dr R.K.Gupta
August 30- Sept. 1 2010	of India, Delhi	

Sept.8,2010	UNFPA Consultation Meeting with senior officers of the Government and NGOs at Patna.	Dr Arvind Pandey
Sept.10,2010	Meeting of Delhi AIDS Control Society, Dr. Ambedkar Hospital, Delhi.	Dr Arvind Pandey
Sept.14,2010	Technical Advisory Committee (TAC) of District Level Household Survey (DLHS- 4) at Min. of H&FW, Nirman Bhavan, New Delhi.	Dr Arvind Pandey
Sept 19,2010	Meeting of Governing body of Institute of Applied Statistics and Development Studies, Lucknow on at New Delhi.	Dr R.Y.Yadav
Sept 23,2010	Meeting of "Home based management of Young Infants" at New Delhi.	Dr R.Y.Yadav, Dr R.K.Gupta, Dr. Tulsi Adhikari, Dr. Atul Juneja
Sept.28- 30,2010	Second Meeting of Organizing Committee of International Conference on Alcohol, HIV and Gender of ICRW at New Delhi.	Dr Arvind Pandey
29 <sup>th</sup> – 30 <sup>th</sup> September 2010	Meeting in central council for research in homoeopathy for verification of statistical analysis of Chronic Sinusitis study.	Dr. Abha Rani Aggarwal
October 10, 2010	Meeting with DCGI on issues related to linking of information on Clinical Trials with CTRI web site available at DCGI.	Dr. Arvind Pandey, Dr. Abha Aggarwal, Dr. Atul Juneja
Oct.15,2010	First Consultative Meeting of Research Advisory Group at Prince Aly Khan Hospital, Mumbai.	Dr Arvind Pandey
Oct.19,2010	Release of the National Report of "Global Adult Tobacco Survey (GATS) India Report at Ram Manohar Lohia Hospital Auditorium, New Delhi.	Dr Arvind Pandey
October 19,2010	Function on the occasion of National release of the "Global Adult Tobacco Survey (GATS) India Report 2010" at new Delhi under the Chairmanship of Hon'ble union Minister of H&FW.	Dr R.Y.Yadav
23 <sup>rd</sup> October 2010	Meeting in central council for research in homoeopathy for statistical analysis of the study on Acute Otitis Media (AOM)	Dr. Abha Rani Aggarwal
October 27, 2010	Lecture entitled "A new method for signal detection with application to AERS data" by Dr.Ram Tiwari, Centre for Drugs Evaluation and Research, FDA, USA at NIMS, New Delhi.	Dr Arvind Pandey, Dr R.J. Yadav, Dr. S.K. Benara, Dr. R.K.Gupta, Dr. Abha Aggarwal, Dr. H.K.Chaturvedi, Dr. D.Sahu' Dr. ,Dr. Atul Juneja, Mr. B.K. Gulati, Mr Jiten
10-12 Nov.2010	Workshop on Issues related to Ethics in HIV research at Maulana Azad Medical College, New Delhi.	Dr. Atul Juneja
11-13 Nov, 2010	Attended the XXVIII ISMS conference organized by the NIMS at National Institute Health and Family Welfare.	Dr. Abha Rani Aggarwal, presented a paper. Dr. Anil Kumar, attended the conferece. Dr. Tulsi Adhikari, presented a paper. Dr. Atul Juneja, moderator for one of the sessions. Mr.Jiten Kh Kumar, presented a paper.
November 15, 2010	Attended the inaugural function of the centenary celebrations of ICMR at India Islamic Cultural Centre, Lodhi Road New Delhi	Dr R.K.Gupta, Dr. Anil Kumar, Dr. Tulsi Adhikari, Dr. Atul Juneja

15-17 Nov,	International Conference on Globalisation, Educational Change and Reforms:	Mr.Jiten Kh Kumar
2010	Comparative Perspectives, at Zakir Husain Centre for Educational Studies, School of Social Sciences and presented "Educational attainment by socio-	
	religious communities in India: evidences from NFHS"	
16-20, Nov.,	Asian Population Association Conference, vigyan bhawa, New Delhi and	Mr.Jiten Kh Kumar
2010	presented "Educational attainment by Socio-religious communities in India :	
	Evidences from NFHS and some implications"	
November	Meeting to finalize the Protocol on the study on Prevention of Acute	Dr. Atul Juneja
18, 2010	Encephalitis Syndrome through Homeopathic care at Central Council for	
	Research in Homoeopathy, New Delhi	
Nov.22,2010	Consultation meeting of Population Council on challenges in measuring youth	Dr Arvind Pandey
	transitions to adulthood at Qutab Hotel, New Delhi.	
Nov. 25-27,	Attended Hindi seminar conducted by Rashtriya Rajbhasha Parishad at Goa	Dr.Atul Juneja
2010	· · · · · · · · · · · · · · · · · · ·	
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Nov 28-30,	Attended the XXXII IASP conference organized by the NIMS at National	Dr. Tulsi Adhikari, Mr.Jiten
2010	Institute Health and Family Welfare and presented paper.	Kh Kumar, Mr. B.K. Gulati
30 <sup>th</sup> Nov to	Workshop on multilevel modeling techniques, St. John's Research Institute,	Dr. Tulsi Adhikari, Mr.Jiten
2 <sup>nd</sup> Dec., 2010		Kh Kumar
December 1,	Attended 'Workshop on Information and Analytical Tools for Medical Science	Dr R.Y.Yadav, Dr
2010	Researchers' organized by M/s Elsevier Group at IOP, Delhi	R.K.Gupta, Dr. Anil Kumar
2-5 Dec 2010	Selected for NIH sponsored workshop on Clinical Trials and Good Clinical	Mr.Jiten Kh Kumar
	Practice at Trivandrum (fully funded by NIH USA through FHI).	
Dec ( 2010	Technical Advisory Crown reacting at Deputation Foundation of India New	Dr. Amind Dondou
Dec.6,2010	Technical Advisory Group meeting at Population Foundation of India, New Delhi.	Dr Arvind Pandey
	Dem.	
Dec.7	Meeting of Expert Committee for estimation of malaria deaths in the country	Dr Arvind Pandey
	at National Vector Borne Disease Control Programme (NVBDCP), Delhi.	
Dec.13	Meeting of Technical Advisory Committee(TAC) of District Level Household	Dr Arvind Pandey
000.13	survey (DLHS) at Ministry of H&FW, Nirman Bhawan.	Di Mi vina i anacy
15 Dec. 2010	IDSP Dissemination workshop conducted at IOP, ICMR New Delhi.	Dr. Arvind Pandey,
		Dr. Tulsi Adhikari,
15 <sup>th</sup>		Mr.Jiten Kh Kumar
15 December	Meeting in central council for research in homoeopathy for verification of	Dr. Abha Rani Aggarwal
2010	statistical analysis of HIV study.	
	Attended Scientific Advisory Committee meeting of the institute.	Dr R.K.Gupta, Dr. Anil
2010	Attended Scientific Advisory committee meeting of the institute.	Kumar, Dr. Tulsi Adhikari
Dec.22	Chairman in the 11 <sup>th</sup> Internal Ethics Committee Meeting of Future Group of	Dr Arvind Pandey
	International India at India Habitate Centre, Lodhi Road.	
Dec.27	Visited Bhopal for the Meeting of Base Line Routine Immunization	Dr Arvind Pandey
	Acceleration in Madhya Pradesh at TAST Office, Bhopal.	
23-28 Dec.,	National workshop on Research Oriented Advanced Statistical Techniques, at	Mr.Jiten Kh Kumar
2010	Gorakhpur	
Dec.31	Meeting of NCD Risk Factor Surveillance, Phase II under National Programme	Dr Arvind Pandey
	for Prevention & control of Cancer, diabetes, CVD & Stroke (NIPCDCS), Nirman	
	Bhavan, New Delhi.	
January	To suggest survey methodology to collect the most common ailments in the	Dr R.Y.Yadav
5,2011	community for which for homoeopathy users from 264 high focus districts on	
*b	the request of CCRH, Deptt of AYUSH, MOHFW, GOI.	
5 <sup>th</sup> January	Meeting in CCRH to finalize the design and sample size of the survey entitled	Dr. Abha Rani Aggarwal
2011	"Identification of the priority disease and preferred AYUSH treatment in 264	
	districts of the country with poor health indications"	

8-11 <sup>th</sup> January 2011	Training programme on Health and Inequalities: Measeures and Models organized by Institute of Social and Economic Exchange at Bangalore.	Dr. Abha Rani Aggarwal
Jan.11- 12,2011	Meeting of Working Group of HIV/AIDS Data Triangulation of Karnataka, Karnataka Health Promotion Trust (KHPT), Bangalore.	Dr Arvind Pandey
January 11, 2011	Workshop conducted by Government of Delhi on Strengthening of Statistical system	Mr.Jiten Kh Kumar
January 11, 2011	Workshop on Health Statistics, New Delhi.	Mr. B.K. Gulati
January 31, 2011	Orientation Program for Site Personnel and LT involved in HSS round 2010 at Delhi State AIDS Control Society Office (DSACS), Dr. Baba Saheb Amedkar(BSA) Hospital, Dharmshala Block, Rohini, New Delhi.	Dr Arvind Pandey
11-13 Feb, 2011	Conference of Indian Association for Social Sciences at SV University Tirupati.	Mr.Jiten Kh Kumar
Jan.12-13	Seminar on "Understanding Health Inequalities in India and Brazil from Micro Data: Measurement, Evidence and Policy at the Institute for Social and Economics Change(ISEC), Bangalore.	Dr Arvind Pandey
Jan 12-14, 2011	HIV impact assessment in four Indian states workshop on Propensity Score Matching, TISS, Mumbai	Mr.Jiten Kh Kumar
Jan.17-19	Workshop on Impact Evaluation of Avahan HIV/AIDS programme organized by LSHTM at the Tata Institute of Social Sciences, Mumbai .	Dr Arvind Pandey
Jan.18-21	National Conference on HIV/AIDS Research of NACO in collaboration with UNAIDS on "Towards Evidence-Policy linkages in HIV/AIDS Research in India" at India Habitat Centre, New Delhi.	Dr Arvind Pandey
January 25,2011	4 <sup>th</sup> Meeting for Monitoring and Evaluation (M&E) –Technical Advisory Group (TAG) Meeting of the Vistaar Project's for Evaluation design at Safdarjung Enclave, New Delhi.	Dr Arvind Pandey
27 Jan, 2011	Meeting of DSMB as a member for the Clinical Trial on Basant cream in cure of HPV at Department of Biotechnology.	Mr.Jiten Kh Kumar
Feb.7-10	15 <sup>th</sup> Conference of Commonwealth Statisticians, CSO at Hotel Le-Meridian.	Dr Arvind Pandey
February 9,2011	Expert group meeting of the ICMR-ICAR Joint Task Force on the Epidemiology of Rabies in India.	Dr R.Y.Yadav
Feb 10, 2011	Project Review Group (PRG) on Women's Health at ICMR.	Dr. Tulsi Adhikari
Field Visits		
April 7-8,2010	Visited Madurai, Kodikanal for IBBA Workshop on 'Lessons Learned'.	Dr Arvind Pandey
October 10- 15, 2010	Visited Bharatpur, Rajasthan to initiate the field work for Maternal Mortality Study.(MMR)	Dr. Abha Rani Aggarwal
21-28 <sup>th</sup> Nov. 2010	Visited Jaipur, Rajasthan to initiate the field work of MMR study and Monitored the field work in Bharatpur district.	Dr. Abha Rani Aggarwal
10-14 <sup>th</sup> Feb. 2011	Visited Jaipur District, Rajasthan to monitor the field work for MMR study.	Dr. Abha Rani Aggarwal
2-5 April 2010	Visited Cuttack for the supervision of the survey on study on home based management of young infants	Dr. Atul Juneja

Meeting at ICMR & Its Institute		
May 14, 2010	PRG Meeting on Women's Health at ICMR.	Dr Arvind Pandey
May 24,2010	Project Advisory Group Meeting for the Hospital based surveillance for childhood morbidity and mortality-Advisory at ICMR.	Dr Arvind Pandey
June 3,2010	Meeting on "Malaria Morbidity Burden Estimation in India' at MRC, Dwarka.	Dr Arvind Pandey
June 18, 2011	Task force Meeting on ICMR India Diabetes: Second Annual Review Meeting of Expert Group.	Dr Arvind Pandey
June 30, 2011	As a Member in the PRG Meeting on Women's Health to review the extramural research activities on clinical and operational studies addressing Women's Health.	Dr Arvind Pandey
Sept.22	5 <sup>th</sup> Advisory Committee Meeting on MIC Gas Victims Constituted by the Hon'ble Supreme Court to take into the various aspects of Bhopal Gas Victims at Bhopal at Vallabh Bhawan, Bhopal.	Dr Arvind Pandey
Sept.23	To discuss plan of analysis as well as to take decision regarding reporting of midterm evaluation of project at ICMR.	Dr Arvind Pandey
Oct.16	Interview for the ongoing activity of filming on ICMR's Activities & Achievements, Interviews at ICMR Hqrs.	Dr Arvind Pandey
Dec.7	Expert committee Meeting for evolving module for estimation of malaria deaths in the country & to develop mathematical model for estimation of Malaria Deaths in the country at NVBDCP, Sham Nath Marg, Delhi.	Dr Arvind Pandey
Dec.31	Discussion on 2 <sup>nd</sup> Phase of NCD Risk Factor surveillance under National Programme for Prevention & control of Cancer, diabetes, CVD & Stroke (NIPCDCS) at, Nirman Bhavan, New Delhi.	Dr Arvind Pandey
January 5,2011	23 <sup>rd</sup> Scientific Advisory Committee Meeting of Regional Medical Research Centre for Tribals (RMRC) at Jabalpur.	Dr Arvind Pandey
January 16, 2011	As a Resource Person in the ICMR Workshop on 'Research Methodology' Govt. Medical College, Chandigarh.	Dr Arvind Pandey
February 2, 2011	2 <sup>nd</sup> Meeting of Project Advisory Group meeting on SRH goals at Committee Room, National Institute of Pathology, New Delhi.	Dr Arvind Pandey
February 10, 2011	Task Force Meeting on Innovative Methodologies in Health Research of ICMR for funding the 55 project proposal & to review the final reports of the projects sanctioned under the Task Force in Statistics ICMR.	Dr Arvind Pandey
February 25, 2011	Meeting for Design and construction of proposed Science Centre for ICMR Hqrs. On ICPO plot at NOIDA.	Dr Arvind Pandey
Feb. 27-28	Selection Committee Meeting for the post of Scientist 'B' at NIOH, Ahmedabad.	Dr Arvind Pandey
March 7, 2011	Technical Advisory committee of DLHS-4 at Committee Room, Near CBHI Wing, Nirman Bhawan, New Delhi.	Dr Arvind Pandey
March 8, 2011	Selection Committee Meeting for conducting interview for the contractual post of State Monitoring and Evaluation Officers at NACO, Min. of H&FW. Chandralok Building, New Delhi.	Dr Arvind Pandey
March 17-18	Scientific Advisory Group (SAG) Meeting of Division of Epidemiology and Communication Diseases (ECD).	Dr Arvind Pandey
March 30, 2011	Expert Committee Meeting on Estimation of Malaria Deaths at organized by NVBDCP at NIMR(ICMR), Dwarka, New Delhi.	Dr Arvind Pandey

Meeting of Ot	her Institute	
April 23- 25,2010	National Seminar on Population Dynamics and Health Issues of Children in India at Trivendrum, University of Kerala.	Dr Arvind Pandey
May 3, 2011	First Meeting of National Organising Committee at Annie Besant Gate, Bhakaji Cama Place, New Delhi. First Meeting of National Organising Committee at Annie Besant Gate, Bhakaji Cama Place, New Delhi.	Dr Arvind Pandey
May 17-18	Meeting for Assessment Board for Scientist "E' (Biostatistics), DRDO, Timarpur, Delhi 110 054.	Dr Arvind Pandey
May 25, 2011	Planning of the various projects involving epidemiological studies at DIPAS, Delhi.	Dr Arvind Pandey
August 6, 2011	Second Meeting of the organizing committee of APA in JSK office at Bhikaji Cama Place, New Delhi.	Dr Arvind Pandey
August 22, 2011	Second DSMB meeting of Zydus Cadila House, Ahmedabad.	Dr Arvind Pandey
September 1, 2011	Synopsis presentation of Ph.D. scholars in Medical Statistics at GGS IP University	Dr Arvind Pandey
September 17-18	Consultation meeting for understanding the various drivers of HIV/AIDS epidemic for formulation of state strategies and program priorities in the state of UP at K.G. Medical College, Lucknow.	Dr Arvind Pandey
September 21, 2011	Meeting at CCRH regarding clarification of Sample Size in Clinical Studies Central Council for Research in Homeopathy (CCRAH), 61-65, Institutional Area, Opp. 'D' Block, Janakpuri.	Dr Arvind Pandey
October 15, 2011	First Consultative RAG Meeting at Board Room of Prince Aly Khan Hospital, Aga Hall, Nesbit Road, Mazagaon, Mumbai.	Dr Arvind Pandey
October 18- 19	Resource person in the Workshop on Nutritional Status of Children in India : Trends and Strategies organized by Institute for Human Development, New Delhi organized by University of Warwick, the Institute for Human Development and the University of Allahabad.	Dr Arvind Pandey
October 19, 2011	First meeting of the Advisory Council of IIPHD at PHFI House, ISID, Institutional Area, Vasant Kunj, New Delhi.	Dr Arvind Pandey
November 17-19	Meeting of the Knowledge Network at Maneshar Haryana.	Dr Arvind Pandey
November 28-30	XXXII Annual Conference of the Indian Association for the Study of Population (IASP) at Bhubaneshwer.	Dr Arvind Pandey
December 21, 2011	Workshop on scale up and replication in ICDS: Lesson learned through CARE at New Delhi.	Dr Arvind Pandey
December 22, 2011	11 <sup>th</sup> IEC meeting of Futures Group International India at India Habitate Centre, Lodhi Road, New Delhi.	Dr Arvind Pandey
January 11- 12,2011	Seminar on "Understanding Health Inequalities in India and Brazil from Micro Data: Measurement, Evidence and Policy at Institute for Social and Economic Change (ISEC), Bangalore.	Dr Arvind Pandey
February 3, 2011	Member of the Asian Population Association Committee Meeting at India Habitate Centre, Lodhi Road, New Delhi.	Dr Arvind Pandey
February 11- 13	Member of the Asian Population Association Committee Meeting at India Habitate Centre, Lodhi Road, New Delhi.	Dr Arvind Pandey
March 11, 2011	Invited as resource person to deliver lectures on "Small Area Estimation: Theory & Applications in Health Sciences " at Gauhati University.	Dr Arvind Pandey

Meeting at/of	NIMS	
April 9- 10,2010	Meeting on National Sample survey on Leprosy organized by MOHFW, NIMS & JALMA at NIHFW.	Dr Arvind Pandey
May 27, 2011	In the Workshop on Epidemiological & Bio-statistical methods using R software in joint collaboration of NIHFW and NIMS held at NIHFW, New Delhi.	Dr Arvind Pandey
June 11, 2011	Dissemination Workshop of NIMS at India Habitate Centre, Mangolia Hall, New Delhi.	Dr Arvind Pandey
Nov.11-13	Organized ISMS conference with Presidential address at NIHFW New Delhi.	Dr Arvind Pandey
Dec.20	Scientific Advisory Committee (SAC) Meeting.	Dr Arvind Pandey
January 25,2011	Meeting of Home Based Management of Young Infants.	Dr Arvind Pandey
March 7,2011	Demonstration of two software, namely, Systat 13 & SPSS.	Dr Arvind Pandey
March 10, 2011	Review Meeting for NIMS ongoing Projects for Ethics Committee Meeting.	Dr Arvind Pandey
March 14, 2011	Ethics Committee Meeting.	Dr Arvind Pandey
March 15-19	Official Training Workshop.	Dr Arvind Pandey
Viva-Voce/Exa	aminer/Doctoral Committee	
May 13,2010	External Examiner for the Ph.D. thesis entitled "Potential role of Health Insurance in Health Care utilization and Quality of Care: A Study of rural West Bengal" submitted by Mr.Avishek Hazra from IIPS, Mumbai.	Dr. Arvind Pandey
June 6, 2011	External Examiner for the Ph.D. thesis entitled "A Sample Theoretical Approach to Statistical Quality control Problems" submitted by Ms. Rajshree Sankle of Vikram University, Ujjain.	Dr. Arvind Pandey
June 22, 2011	External Examiner for the Ph.D. thesis entitled "Study of Low Birth Weight and its consequences through Infancy" Submitted by Ms. Anjali Babar, of IIPS.	Dr. Arvind Pandey
July 31, 2011	Send comments on International Study funded by NIH "A Multi-centre Trial of the AIDS Clinical trials Group (ACTG)" A5265 to Director, NIV, Pune.	Dr. Arvind Pandey
Sept.15	External Examiner for the Ph.D. thesis entitled "Factors and Processes Determining contraceptive Choice: A Study in West Bengal submitted by Ms. Sharmistha basu from JNU, Delhi.	Dr. Arvind Pandey
Sept.28	Setting of Question Papers for Under Graduate Examination – 2011 – IIIrd Year B.Sc. Sampling Theory ANOVA & Design of Experiment (Paper-VI) for the Mizoram Universy, Tanhril.	Dr. Arvind Pandey
October 6, 2011	External Examiner for the Ph.D. thesis entitled "A Sample Theoretical Approach to Statistical Quality control Problems" submitted by Ms. Rajshree Sankle from Vikram University, Ujjain.	Dr. Arvind Pandey
October 8, 2011	Reviewed the academic work for the assessment of Asstt. Professors of Institute for Social and Economic change, Bangalore.	Dr. Arvind Pandey
October 25, 2011	Reviewed the "Study of Low Birth Weight and its Consequences through Infancy" submitted by Ms. Anjali babar for the Ph.d. degree in Population Studies of IIPS, Mumbai	Dr. Arvind Pandey
October 27, 2011	External Examiner for the Ph.D. thesis entitled "Robustness of some statistical Tests and Certain Other Problems in Quality Control" submitted by Mr. Dharma Pal Singh from Vikram University, Ujjain.	Dr. Arvind Pandey

Dec.30	Send comments on the paper Gender-Based violence and Its Effects on RCH Service Utilization in Uttar Pradesh to IJMR, New Delhi.	Dr. Arvind Pandey
February 18,2011	External Examiner for the Ph.D. thesis entitled "Fertility Decline in Orissa since the 1970s: Transition in Conditions of Low Development" of Mr. Harihar Sahoo of JNU, New Delhi.	Dr. Arvind Pandey
February 21, 2011	Ph.D. Viva Voce examination of Ms. Rajshree Sankle at Vikram University, Ujjain for his thesis entitled "A Sample Theoritical Approach to Statistical Quality control Problems".	Dr. Arvind Pandey
March 3, 2011	Send comments on the paper entitled "Estimates of Mortality and Morbidity in India's health Management Information System for the Special Issue on Reshaping Health Statistics of the Statistical Journal of the International Association of Official Statistics.	Dr. Arvind Pandey
March 22, 2011	Ph.D. Viva Voce examination of Ms. Nandita Saikia at IIPS, Mumbai for his thesis entitled "Adult Mortality in India: Levels, Trends, Determinants and Causes " in Population Studies.	Dr. Arvind Pandey



Dr. Atul JUneja Along with Mr. B.S. Sharma attended a Hindi seminar conducted by Rashtriya Rajbhasha Parishad at Goa from 25<sup>th</sup> to 27<sup>th</sup> November 2010. About 30 participants from different government organizations and public sector were present in the seminar.

## V Publications

- 1. Abha Aggarwal & Arvind Pandey (**2010**): Inverse sampling for study of Leprosy *Indian Journal of Medical Research* Vol 132 October 2010, pp438-441.
- 2. Abha Rani Aggarwal, Mohua Maulik, &SD Seth (**2011**): Strengthening Ethics in Clinical Research. *Indian Journal of Medical Research*, Vol 133 March 2011 pgs.339-340.
- Arvind Pandey, Abha Rani Aggarwal, Mohua Maulik, &SD Seth (2010): Clinical Trials Registry – India: Raising the Veil. *National Medical Journal of India*, Vol 23; No.3; pgs 187-188.
- 4. Arvind Pandey, Nandini Roy, Rahul Dev Bhawsar and R.M. Mishra (2010) Health information system in India: Issues of data availability and quality, *Demography India*, Vol. 39(1), pp.111-128.
- Arvind Pandey, R.M. Mishra, Nandini Roy & K.M. Sathyanarayana (2010) Population Research and Millennium development goals in India, In K.S. James, Arvind Pandey, Dhananjay W. Bansod & Lekha Subaiya (Eds.) *Population, Gender and Health in India: Methods Processes and Policies*, Academic Foundation, New Delhi, pp. 47-65.
- Damodar Sahu, Arvind Pandey, B.K.Gulati and Nomita Chandhiok (2010) Factors affecting postpartum non-susceptible period in Orissa: A Multivariate Survival Analysis with Time Dependent Covariates, In K.S.James, Arvind Pandey, Dhananjay W. Bansod & Lekha Subaiya (Eds.) Population, *Gender and Health in India: Methods, Processes and Policies*, Academic Foundation, New Delhi, pp. 139-152.
- 7. J.C.Suri, M.K.Sen, Tulsi Adhikari: Familial aggregation of sleep disorder A questionnaire survey: *Ind J. Sleep Medicine*. Vol .4(3), July, 2010.
- 8. J.C.Suri, M.K.Sen, Jyotsna Suri, Sonal Vaidya, Tulsi Adhikari: Epidemiology of sleep disorder in pregnant subjects A questionnaire survey: *Ind J. Sleep Medicine*. Vol .5(2), April, 2010.
- 9. Juneja A, Pandey A, Tuteja RK, Sehgal A. Burden of Cancer In Terms Of Person Years of Life Lost Due to Premature Mortality. *Journal of Indian Society of Statistics and Operations Research* 31(1-4), 15-19, 2010
- 10. Juneja A., Pandey A, Tuteja RK, Sareen D. Risk of Development of Cancer with Demographic transition. In Advances in Information Theory and Operations Research (2010),pp.348-352, Om Parkash (Ed.) VDM Verlag Germany.
- 11. Madhusudan J.V., Kh. Jitenkumar Singh, Jeetendra Yadav, Study of Trends and Determinants of Educational Attainment in Major States in India, *Journal of Human Development*, 2:(2) July-Dec., 2010 : 177-192

- 12. Onychomycosis : An Asian Prospective ; Virendra N. Sehgal, Govinda Srivastava, Sunil Dogra, Anuradha Chaudhary, Tulsi Adhikari. *SkinMed* 37-45; Vol. 8(1), Jan/Fab 2010.
- 13. Pradeep Das, Steven Samuels, Philippe Desjeux, Atul Mittal, Roshan Topno, Niyamat Ali Siddiqui, Dipika Sur, Arvind Pandey and Rhonda Sarnoff (2010) Annual incidence of visceral leishmaniasis in an endemic area of Bihar, India, Tropical Medicine and International Health, Vol. 15 (Suppl), pp.42-49, July 2010.
- 14. Shahina Begum, S.N. Dwivedi, Arvind Pandey & Suneeta Mittal (2010) Factors associated with unwanted pregnancies in India through a hierarchical model, *Model Assisted Statistics and Applications*, Vol. 5, pp. 197-202.
- 15. Shahina Begum, S.N. Dwivedi, Arvind Pandey & Suneeta Mittal (2010) Association between domestic violence and unintended pregnancies in India: Findings from NFHS-2 data, *National Medical Journal of India*, Vol. 23(4), 198-200.
- R.J. Yadav, Arvind Pandey, Jeetendra Yadav (2011) Use of traditional healer in Indian System of Medicine according to literacy level, Population and Reproductive Health – Perspectives & Issues, (Eds.) U.V. Somayajulu, K.K. Singh, K.V.R. Subrahmanyam & Arvind Pandey, Hindustan Publishing Corporation, New Delhi, pp. 125-130.
- 17. Rhonda Sarnoff, Jaikishan Desai, Philippe Desjeux, Atul Mittal, Roshan Topno, Niyamat Ali Siddiqui, Arvind Pandey, Dipika Sur and Pradeep Das (2010) The economic impact of visceral leishmaniasis on rural household in one endemic district of Bihar, India, *Tropical Medicine and International Health*, Vol. 15 (Suppl), July 2010.
- Uma Saha, R.K. Sharma, Kalyan Saha, Arvind Pandey (2011) Role of demand for children and family welfare programme in fertility decline in Andhra Pradesh: Evidences from the National Family Health Survey, Population and Reproductive Health – Perspectives & Issues, (Eds.) U.V. Somayajulu, K.K. Singh, K.V.R. Subrahmanyam & Arvind Pandey, Hindustan Publishing Corporation, New Delhi, pp. 12-21.

#### **Books Authored/Edited**

- Population and Reproductive Health Perspectives & Issues, (Ed.) U.V. Somayajulu, K.K. Singh, KVR Subrahmanyam & Arvind Pandey, Hindustan Publishing Corporation, New Delhi, 2011.
- Population, Gender and Health in India: Methods, Processes and Policies, (Ed.) K.S. James, Arvind Pandey, Dhananjay W. Bansod & Lekha Subaiya, Academic Foundation, New Delhi, 2010.

# VI Statistical Consultancy

#### **Dr. Arvind Pandey**

Reviewer of the following journals

Indian Journal of Medical Research, India Demography India, India Journal of Family Planning and Reproductive Health Care, UK Demography, USA Population Studies, UK Population Policy Review, USA International AIDS Conference, Austria AIDS STI AIDS & Behaviour

#### Dr. R.J.Yadav

#### **Teaching and Examiners**

- 1. Examiner of the Ph.D. degree of Ms. G.Rama of University of Chennai, Chennai.(TN)
- 2. Examiner of the M.V.Sc. degree of Dr S.Meenakshi Sundaram of Indian Veterinary Research Institute, Deemed University, Berielly (UP)

#### Dr. R.K.Gupta

- 1. Reviewed papers for Indian Journal of Medical Research
- 2. Provided suggestions on analysis of Bhopal Gas Tragedy Data to the scientists of National Institute for Research in Environmental Health, Bhopal.
- Prepared special publication for ICMR Centenary Celebrations entitled 'Surveys on Morbidity, Mortality and MCH in Delhi by NIMS'

#### Dr Abha Rani Aggarwal

Provided statistical consultancy to a number of doctors and students for various Medical Colleges and hospitals, viz, Lady Hardinge Medical college & Smt. Sucheta Kriplani Hospital'

Maulana Azad Medical College, Rajasthan University, Kalawati Saran Children's Hospital, RML hospital, Department of Gynecology, Safdarjung hospital, Department of Optholomology, Safdarjung hospital, NARI

Reviewer of Indian Journal of Medical Research: Reviewed 6 research articles

#### Dr. Tulsi Adhikari

Extended consultancy to the DPS society for the development of software for capturing health profile with needful actions for the students of its school in Delhi and NCR

Extended consultancy to Central Council for Research in Homopathy in finalizing the protocols, methodology, analysis and reports writing for their various research projects..

Provided methodological and analysis guidance to the doctors and students (Researchers) from various hospitals viz., AIIMS, Maulana Azad Medical College, Safdarjung Hospital etc.

#### **Reviewer of Indian Journal of Medical Research**

#### Dr. Atul Juneja

Extending consultancy to the DPS society for the development of software for capturing health profile with needful actions for the students of its school in Delhi and NCR

Advised more than 10 PG and faculty from Maulana Azad Medical College, GB Pant Hospital, Apollo hospital, Safdarjung Hospital for statistical issues in their research work.

#### **Reviewer of the following journals**

Indian Journal of Medical Research, Indian Journal of Cancer, Indian Pediatrics

### LIST OF SAC MEMBERS

1.	Prof. P.S.S. Sunder Rao, Ex-Prof. & Head, CMC, Vellore. C/o Research Resource Centre, TLM Media Centre, B-13A, Institutional Area, Sector -62 NOIDA U.P 201 307.	Chairman
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6.	Dr. Padam Singh, Ex-Additional DG, ICMR Head – Health Research, EPOS , 447, Udyog Vihar, Phase-III Gurgaon-122 016, Haryana	Member

7.	Dr. F. Ram, Director, International Institute of Population Sciences, Station Govandi Road, Deonar, Mumbai: 400 088.	Member
8.	Shri D.K. Subbakrishna, Professor & Head, Deptt. of Biostatistics, NIMHANS, Bangalore.	Member
9.	Shri C.Chandramauli Registrar General of India & Census Commissioner, 2-A, Man Singh Road, New Delhi : 110 011.	Member
10.	Dr. Ratan Chand, Chief Director (Statistics), Ministry of Health & Family Welfare, Nirman Bhawan, New Delhi-110011.	Member
11.	Dr. R.S. Paranjape, Director, National AIDS Research Institute, Plot No. 73, 'G' Block, MIDC Bhosari, Pune : 411 026.	Member
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13.	Dr. Deoki Nandan, Director, National Institute of Health & Family Welfare, Muniraka, New Delhi-110067.	Member

- 14. Dr. Rajesh Kumar, Prof. & Head, Deptt. of Community Medicine, PGI, Chandigarh.
- 15. Dr. Lalit Kant, Head, Divison ECD, ICMR, New Delhi-110029.
- 16. Dr. Arvind Pandey Director,NIMS, New Delhi.

Member

Member

Member Secretary

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Dr. Sanghamitra Acharya, Associate Professor, Centre for Social Medicine & Community Health, School of Social Sciences, Jawaharlal Nehru University, New Delhi-110067.

Dr. Arvind Pandey, Director, National Institute of Medical Statistics, Ansari Nagar, New Delhi-110029. Chairman

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