'Support to Indian Institutes for imparting training' to the Faculty of Medical Colleges/ Research Institutes under Human Resource Development Scheme of Department of Health Research

1. **Area of Training**: Operational Research

2. **Name of the Institution and contact details:**

   All India Institute of Medical Sciences,

   Ansari Nagar, New Delhi

3. (a) **Name of the Principal Investigator and contact details**

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   (b) **Name of the Co- Investigators and contact details**

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   Dr. Shashi Kant,

   Professor Incharge,
   Comprehensive Rural Health Services Project, Ballabgarh,
   Centre for Community Medicine,
   All India Institute of Medical Sciences,
   Ansari Nagar, New Delhi-110029
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4. **Training Module**

Programme **-**Duration of the training- Minimum 4 weeks/1 month

The programme emphasizes on principles of adult learning and will be output oriented training programme. Key outputs envisaged from the training programme will be development of operational project proposal/ concept note; analysis of data set related to operational research and writing a scientific manuscript related to operational research. The trainees may develop all these outputs and/ or parts related to them.

The training on operational research will be conducted in four modules, of one week duration each.

The modules are as follows:

Module 1: Introduction to operational research

Module 2: Writing an operational research proposal

Module 3: Efficient, quality- assured data capture and analysis using statistical softwares

Module 4: Scientific writing/ writing a manuscript and disseminating your research findings

I. Introduction

Operational, implementation and health systems research have been recognized importantly as public health tools for achieving the broad goal of universal health care. These type of research particularly aims at finding innovative solutions to common operational and implementation problems confronted in routine public health problems. Often to plan and execute these types of research on ground, a team of researchers and programme managers are required. One of the lacuna realized is inadequate capacity of public health personnel including academicians to carry out operational and implementation research. Skills required in planning, designing and analyzing results of research involve mainly domains of epidemiology, biostatistics, qualitative research techniques, project management, program monitoring and evaluation and scientific writing. Currently, global and national agencies are promoting capacity building initiatives for wider utilization of research techniques for public health goods.

II. Aim of the program

The aim of the programme is to build competencies of Indian faculty and scientists in operational research so that they can write scientific projects relevant to national health programme needs and contribute to better public health situation of the country.

III. Existing faculty members, their details, positions, available with the institution for imparting training programme.

Resource Faculty From AIIMS, New Delhi	
Prof. C.S. Pandav	Professor & Head of the Department, Centre for Community Medicine (CCM), AIIMS, New Delhi.
Prof. Shashi Kant	Professor, Centre for Community Medicine, AIIMS, New Delhi. Professor In Charge, Comprehensive Rural Health Sciences Proje Ballabgarh
Prof. Sanjeev K. Gupta	Professor, Centre for Community Medicine, AIIMS, New Delhi.
Prof. Kiran Goswami	Professor, Centre for Community Medicine, AIIMS, New Delhi.
Prof. Anand	Professor, Centre for Community Medicine, AIIMS, New Delhi.

Krishnan	
Prof. V. Sreenivas	Professor, of Biostatistics, AIIMS, New Delhi.
Prof. S. N. Dwivedi	Professor, of Biostatistics, AIIMS, New Delhi.
Prof. R. M. Pandey	Professor, of Biostatistics, AIIMS, New Delhi.
Prof. Baridalyne N.	Professor, Centre for Community Medicine, AIIMS, New Delhi.
Prof. Puneet Misra	Professor, Centre for Community Medicine, AIIMS, New Delhi.
Prof. Sanjay K. Rai	Professor, Centre for Community Medicine, AIIMS, New Delhi.
Prof. Praveen Vashist	Professor and Officer Incharge, Community Ophthalmolog Dr. R P Centre for Ophthalmic Sciences, AIIMS, New Delhi.
Dr. Y.S. Kusuma	Additional Professor of Medical Anthropology, CCM, AIIMS, ND
Dr. Kapil Yadav	Assistant Professor, Centre for Community Medicine, AIIMS, New Delhi.
Dr. Anil K. Goswami	Additional Professor of Health Education, CCM, AIIMS, ND
Dr. Sumit Malhotra	Assistant Professor, Centre for Community Medicine, AIIMS, New Delhi.
Dr. Partha Haldar	Assistant Professor, Centre for Community Medicine, AIIMS, New Delhi.
Dr. Ravneet Kaur	Assistant Professor, Centre for Community Medicine, AIIMS, New Delhi.
Dr. Rahul Sharma	Assistant Professor, Centre for Community Medicine, AIIMS, New Delhi.
Dr. Harshal R. Salve	Assistant Professor, Centre for Community Medicine, AIIMS, New Delhi.
Dr. Vivek Gupta	Assistant Professor, Dr. R P Centre for Ophthalmic Sciences, AIIMS, Ne Delhi.
Dr. Ashwani Mishra	Assistant Professor, of Biostatistics, AIIMS, New Delhi.
Dr. Noopur Gupta	Assistant Professor, Ophthalmology, Dr. R P Centre, AIIMS, New Delhi.
Dr. M. Kalaivani	Scientist-III, Department of Biostatistics, AIIMS, New Delhi.
Mr. Yogesh Kumar	Educational Media Generalist at K L Wig Centre for Medical Education Technology, AIIMS, New Delhi.
Dr. Ritvik	Centre for Community Medicine ,All India Institute of Medical Scienc (AIIMS), New Delhi

IV. Available infrastructure facilities

The trainings will be conducted at Comprehensive Rural Health Services Project (CRHSP), Ballabgarh which is the rural field practice area of Centre for Community Medicine, AIIMS, New Delhi and All India Institute of Medical Sciences Premises.

The CRHSP Ballabgarh has a seminar room with a state of the art information technology facilities and hostel facility for housing participants of the training.

The CRHSP Ballabgarh and AIIMS, New Delhi have fully equipped infrastructure facilities for hosting training programmes for the participants.

It has already hosted previous year trainings on operational research as part of this scheme of DHR.

V. Training schedule with elaborate details day wise or week wise along with the topic.

Module 1

Module Theme: General Introduction to operational research, designs in OR

	Monday	Tuesday	Wednesday	Thursday	Friday
9:30-11:15 am	Introduction of course, participants, Pre-test	OR research terminology-hypothesis, determinants, outcomes, objectives	Observational study designs overview	Case Control Study and OR	Introduction to experimental studies and RCTs Overview
11:15-11:30 am	Tea				
11:30- 1:00 pm	OR Introduction-what, why, how	The research question and appropriate methodology	Descriptive studies and OR(Case reports, case Series, ecological)	Cohort Study and OR	Quasi-experimental studies and OR
1:00-2:00 pm	Lunch				
2:00-3:30 pm	Translating OR into policy and practice; perceived barriers and solutions to OR	Group exercise on framing a research question	Cross Sectional studies and OR	Effective literature search	Concepts of reliability and validity relevant to OR
3:30-3:45 pm	Tea				
3:45- 5:00 pm	Case studies in OR	Group exercise on framing a research question-Contd.	Journal article/ project report readings and discussions	Journal article/ project report readings and discussions	Journal article/ project report readings and discussions

Module 2
Module Theme: Writing an OR proposal

	Monday	Tuesday	Wednesday	Thursday	Friday
9:30-11:15 am	Protocol skeleton described	Sample Size Overview	Presentations by participants	Case Studies on Ethics and OR	Qualitative research and OR
11:15-11:30 am	Tea				
11:30- 1:00 pm	ICMR format for proposal writing (Guest lecture from ICMR expert) and submission process	Practical exercises for sample size	Presentations by participants- research protocols and methods	ICMR Guidelines on Ethics (Guest lecture from ICMR expert)	Conducting a FGD with mock exercise
1:00-2:00 pm	Lunch				
2:00-3:30 pm	Writing Background and methods section of protocol	Sampling methods Overview	Ethics in research overview	Consent form and participant information sheet	Interviews and key-informant interviews
3:30-3:45 pm	Tea				
3:45- 5:00 pm	Contd.	Writing methods section	Film presentation on ethics	Filling up ethics form	Reading an article on qualitative research

Module 3

Module Theme: Efficient, quality- assured data capture and analysis using Statistical softwares

VI.

	Monday	Tuesday	Wednesday	Thursday	Friday
9:30-11:15 am	Welcome and Introduction to Statistics	Understanding measures of estimates p value, CI	Correlation and Regression-Linear and Multivariable	EpiDATA software Introduction , preparing a data documentation sheet	Inferential statistics and EpiDATA
11:15 - 11:30 am	Tea				
11:30 - 1:00 pm	Descriptive Statistics	Simple tests for association	Basics of Survival Analysis	Creating QES, REC and CHK files, sample data for data entry and data validation	Survival analysis, tables and figures in EpiDATA
1:00-2:00 pm	Lunch				
2:00-3:30 pm	Session on Practical Statistics-STATA	Session on Practical Statistics-STATA	Session on Practical Statistics-STATA	Overview of EpiData Analysis	Participants work on their data sets for analysis
3:30-3:45 pm	Tea				
3:45-5:00 pm	Session on Practical Statistics-STATA	Session on Practical Statistics-STATA	Session on Practical Statistics-STATA	Epidata commands on descriptive statistics and participants practice them	Participants work on their data sets for analysis

VII. **Module 4**

Module Theme: Scientific Writing/ Writing a manuscript and disseminating your research findings

	Monday	Tuesday	Wednesday	Thursday	Friday
9:30-11:15 am	Publication without perishing- Introduction to scientific writing	Example of results section	Reporting Guidelines- STROBE for observational studies	Submission Demonstration of online submission	Having a dissemination plan and channels
11:15-11:30 am	Tea				
11:30-1:00 pm	Choosing a journal- brainstorming journal guidelines	Discussion Section of manuscript	Bits and Pieces- Abstract, title, funding, authorship	The review process Example of peer review Handling revision/ rejection	Advocating for your findings, Media briefs and policy briefs
1:00-2:00 pm	Lunch				
2:00-3:30 pm	Example of Introduction and methods in manuscript	Writing references through reference manager- EndNote and Mendley	Plagiarism and demonstration of anti-plagiarism check	Participants present their draft sections of manuscript	Participants work in groups preparing a media brief/ policy brief
3:30-3:45 pm	Tea				
3:45-5:00 pm	Participants work on these sections	Participants work on these sections	Participants work on these sections	Participants present their draft sections of manuscript	Participants present their policy briefs/ media briefs

VI. **Relevance in public health**

Operational Research has many benefits to public health needs. There are many National health programmes implemented like Reproductive Child Health programme, TB, Vector borne diseases, blindness control etc. . These suffer from operational and implementation bottlenecks that result in poor coverage of interventions and sub-optimal results. These bottlenecks need to be identified and rectified with newer innovative solutions that have bearing for programme practice at grass roots level. Operational research tools aim to identify these bottlenecks and test innovative solutions to improve programme implementation and achieve best results at grass roots levels.

5. **Eligibility Conditions**

The potential participants can be:

1. Faculty and scientists on regular positions engaged in public health, social sciences, community medicine and relevant fields.
2. Non-governmental Institutes programme staff who want to upgrade their research competencies.
3. Faculty and staff from National, regional and state level training Institutes of health and family welfare.

   People engaged in public health practice will be benefitted from the training programme who have keen interest in designing and conducting research projects at field level.