About the Institute

The National Institute of Health & Family Welfare is a premier autonomous Institute, funded by the Ministry of Health and Family Welfare, Government of India. It has kept pace with the new thinking and substantially contributed to the health manpower development in the country.

NIHFW serves as an apex 'technical institute' as well as a 'think tank' to promote national health and family welfare programmes in the country through education and training, research and evaluation, consultancy & advisory services, specialized projects, etc.

The Department of Epidemiology and Department of Statistics and Demography of the institute is organizing an online training course on **"Application of Biostatistics in Epidemiology and Public Health"**. Due to various restrictions for the present COVID-19 pandemic situation, NIHFW has taken an initiative to conduct the training courses on the virtual platform.

Course Coordinating Team

Course Coordinator   :   Prof. Jayanta K. Das

Course Co-Coordinator :   Prof. P. Swain

Course Associates   :   Dr. J.P. Shivdasani

                                          Mrs. Bhawna Kathuria

                                          Mrs. Vaishali Jaiswal

Last date for sending nomination

4th December, 2020

Further Correspondence to be addressed to:

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Training Course on Application of Biostatistics in Epidemiology and Public Health

14th – 18th December 2020

Department of Epidemiology
and
Department of Statistics & Demography
The National Institute of Health and Family Welfare,
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Introduction

To have a better health care delivery system and health management, the programme managers and academia require evidence which usually comes from research. Research in public health requires an adequate information which comes from quality data and its scientific analysis. Biostatistics is an interdisciplinary scientific field and Biostatisticians develop and apply statistical methods to scientific research in health-related fields, including medicine, epidemiology, and public health etc. The role of the biostatistician is an important one, especially when it comes to designing studies and analyzing data from research problems. Whereas Epidemiologists study the distribution and determinants of health and disease in populations.

Epidemiology and biostatistics both are the cornerstone of public health research and practice. It is very important for program officers, academicians, public health researchers to have basic knowledge and skills of epidemiology and biostatistics and its application.

This training course introduces the health researchers to the quantitative methods that are helpful in public health research and evidence-based public health policy and practice. Statistical and epidemiological concepts will be taught in parallel to promote integration of knowledge across both disciplines.

General Objective

To enhance the knowledge and skills of the health professionals in application of biostatistics in field of epidemiology and public health.

Specific Objectives

This course will prepare the participants:

- To reinforce the basic knowledge of epidemiological methods and its practical applications in public health settings.

- To describe the biostatistical skills involved in the analysis of health statistics.

Course Contents

- Introduction to Epidemiology
- Measures of disease occurrence and risk
- Epidemiological Study design- Descriptive, Analytical and Experimental
- Bias in Epidemiological studies and confounding factors
- Surveillance and Screening
- Reliability and validity of screening and diagnostic tests
- Statistical exercises those are applicable in epidemiological studies
- Introduction to Biostatistics in Public Health
- Data Collection- Tools and Techniques
- Data Presentation techniques
- Data summarization
- Sampling technique and sample size estimation
- Introduction to Inferential Statistics and Hypothesis Testing
- Tests of significance
- Correlation and Regression

Methodology

The training course will be conducted by online mode through Google meet. Link will be sent to registered participants, the course can then be accessed at specified time using a desktop, laptop or tablet. Participatory approach will be adopted throughout the course comprising of:-

- **Lecture Discussions:-** Each lecture session of one hour time will be followed by discussion and interaction with the participants.
- **Case Studies:-** Sample case studies will be discussed.
- Problem solving exercises as assignments.

Duration

5 days (14th—18th , December 2020) 3-4 hours daily.

Course Fee

There will be a course fee of Rs. 5000/- per participant need to be paid through online banking.

Nature of Participants

The participants will be health professionals working in Government Medical and Nursing Colleges, SIHFW. Demographers, Epidemiologists, Statisticians and Biostatisticians from central & state government and public sector undertakings.

Training Outcome

The course will be helpful in capacity building of the faculty of the medical colleges and other public health personnel to analyze the health statistics in public health research.