



Department Of Community Medicine Maharani Laxmi Bai Medical College, Jhansi (UP) (Under Government of Uttar Pradesh)

Biostatistics Workshop

on

Sample Size Determination for Biomedical Studies

Dates: 17th – 18th April 2026

Venue:- Seminar Hall, Department of Community Medicine
MLB Medical College, Jhansi



Patron

Co-Patron

Chief Guest

Guest of Honour



Prof. (Dr.) Sheo Kumar

Principal,
MLB Medical College
Jhansi



Dr Mayank Singh

Vice-Principal,
MLB Medical College,
Jhansi



Dr. B L Verma

NAMS Emeritus Professor &
Former Professor of Biostatistics,
MLB Medical College, Jhansi



Dr. Manju Govil

Former Professor of
Community Medicine,
MLB Medical College,
Jhansi

Resource Faculty



Dr. B L Verma

NAMS Emeritus Professor & Former Professor
of Biostatistics, MLB Medical
College, Jhansi



Dr. Anup Kumar

Additional Professor of
Biostatistics, SGPGI
Lucknow



Dr Ashish Awasthi

Senior Scientist & Assistant Professor
of Biostatistics
CSIR-Central Drug Research Institute,
Lucknow



Ravi Prakash Jha

Research Analyst-Biostatistics,
NTAGI Secretariat, NIHFW, New Delhi

Host Organizing Committee

Dr. Mehar Bano

Head of Department &
Organizing Chairperson

Dr. Shobha Chaturvedi

Associate Professor

Dr. Vimal Arya

Associate Professor

Dr. Sudha Sharma

Assistant Professor

Dr. Bharti

Assistant Professor
cum Biostatistician

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Senior Resident

Dr. Krishna Kumar Singh

Senior Resident

Dr. Yashwant Singh

Senior Resident

Dr. Ramavtar Yadav

Junior Resident

Dr. Pradeep

Junior Resident

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Junior Resident

Dr. Satya Prakash

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Workshop Fee
Rs. 1,000/- per Participant
(Non Refundable)

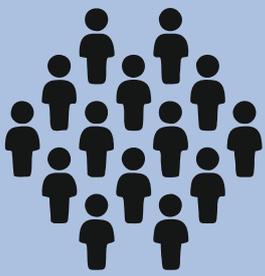
Registration link is given below :

<https://forms.gle/hHMKDZGCA2syNXAJA>

Registration fee will cover :
participation in scientific
sessions, printed study
material, certificate,
breakfast, lunch &
tea/coffee.

Note:-

- Outstation participants have to arrange their own accommodation.
- Participation in both pre and post lunch sessions is must to get certificate.
- Limited Registration for 70 participants.
- Registration will be on "first come first serve" basis.



Program



Day 1 – Friday, 17 April 2026

Time	Activity	Venue / Resource Faculty
08.30-09.30 am	Breakfast, Registration & Pre-test	Dept. of Community Medicine
09.45-10.30 am	Opening Ceremony	Seminar Hall, Dept. of Community Medicine
10.45-11.00 am	Tea-Break	Dept. of Community Medicine
I. Sample Size Determination for Descriptive Studies		
11.00 -11.45 am	<p style="text-align: center;">Lecture 1</p> Principles of sample size determination and essential concepts used to obtain adequate sample size.	Dr. B L Verma
11.45am -12.30 pm	<p style="text-align: center;">Lecture 2</p> Sample size determination for estimating a mean and Hypothesis testing of difference in means [Illustrations to be given with case scenario examples].	Dr. Anup Kumar
12.30-12.45 pm	Tea Break	Seminar Hall
12.45-01.30 pm	<p style="text-align: center;">Lecture 3</p> Sample size determination for a proportion and Hypothesis testing for difference in proportions [Illustrations to be given with case scenario examples].	Dr. Anup Kumar
01.30-02.30 pm	Lunch Break	Seminar Hall
02.30-03.15pm	Sample size determination for Diagnostic Studies	Ravi Prakash Jha
II. Sample Size Determination for Analytical Studies – Observational.		
003.15-4.00pm	<p style="text-align: center;">Lecture 4</p> Brief about Observational Studies - Prospective Studies, Cross Sectional Studies and Retrospective Studies.	Dr. B L Verma
04.00-4.15pm	Tea Break	In Seminar Hall
04.15-5.15 pm	<p style="text-align: center;">Lecture 5</p> Sample size determination in Cohort Studies for estimation of Incidence Rate as well as of Relative Risks (for 2 groups only) and for Hypothesis testing [Illustrations to be given with case scenario examples].	Dr. Anup Kumar
05.15 -05.30 pm	General discussion on sample size in Cohort Studies (Questions & Answers)	Dr. Anup Kumar

Day 2– Saturday, 18 April 2026
Sample Size Determination for Analytical Studies – Observational
(To be continued).

Time	Activity	Venue / Resource Faculty
08.30-09.30 am	Breakfast	Dept. of Community Medicine
09.30-10.15 am	Lecture 6 Sample size determination in Case Control Studies for estimation of Odds Ratio [Illustrations to be given with case scenario examples].	Dr. Ashish Awasthi
10.15-11.00 am	Lecture 7 Sample size determination in Case Control Studies for testing of Hypothesis for Odds Ratio (OR) in different situations [Illustrations to be given with case scenario examples].	Ravi Prakash Jha
11.00-11.15 am	Tea-Break	Seminar Hall
III. Sample Size Determination for Analytical Studies Interventional Studies / Clinical Trials		
11.15-12.00 noon	Lecture 8 Essential concepts of Clinical & Community Trials	Dr. Ashish Awasthi
12.00-12.45 pm	Lecture 9 Types in Clinical Trials–Superiority Trials, Equivalence Trials & Non- inferiority Trials and Trial size, etc	Dr. Ashish Awasthi
12.45-01.00pm	General discussion on Clinical Trials (Questions & Answers)	Dr. Ashish Awasthi
01.00-02.00 pm	Lunch Break	In Seminar Hall
02.00-2.45 pm	Lecture 10 Sample size determination in Clinical Trials under different situations [Illustrations to be given with case scenario examples].	Dr. Ashish Awasthi
02.45-03.30 pm	Lecture 11 Special issues related to sample-size in medical studies – Adjustment of sample size for non-response, drop-outs, clustering of sampling units, rare diseases, feasibility issues and Ethical Committee expectations.	Ravi Prakash Jha

03.30-04.15 pm	Lecture 12 Statistical Significance versus Medical/Clinical Significance -Importance in Sample size calculation	Ravi Prakash Jha
04.15- 5.00 pm	Post-test & Valedictory Session (Presentation of Certificates to the Attendees)	In the Seminar Hall

About the Workshop

Sample size is an essential component in any research, and its estimation is one of the most crucial steps in designing a research study. The main purpose of this Biostatistics Workshop is to determine the minimum number of subjects/participants required in a study to derive valid conclusions. The size of a sample influences the precision of the estimates and the power of the study. This Workshop is proposed to enhance the knowledge of the researchers regarding the importance of sample size and essentials in its estimation along with sample size estimation methods in different scenarios added with hands on training.

Objectives

- To understand the role of sample size in valid and ethical medical research.
- To learn practical methods of sample size calculation for common medical study designs.
- To apply sample size concepts to clinical and biomedical studies.
- To ensure compliance with ethical and regulatory expectations of the National Medical Commission.

Workshop Contents

Sample Size Determination for Descriptive Studies

- Role of Sample Size in Medical Research
- Bio statistical Concepts Used in Medical Studies
- Errors, Power & Effect Size in Clinical Contexts
- Sample Size for Estimation of Prevalence & Proportion
- Sample size in Diagnostic Studies
- Sample Size for Estimation of Mean in Medical Data

Sample Size Determination for Analytical Studies

- Sample Size for Comparison of two Means
- Sample Size for Comparison of two Proportions
- Sample size for Detecting a Minimum Clinically Important Difference

- Sample Size in Clinical Trials
- Special Issues in Medical Research
- Hands-on Sample Size Calculation in Medical Studies

Who Should Attend

- Postgraduate (MD/MS) and Super speciality (DM/MCh.) students involved in thesis writing or in biomedical research studies.
- Medical faculty and researchers involved in clinical and academic research and in research grants proposals.

Workshop Highlights

- Comprehensive Offline Sessions focused on Sample Size Determination by expert led lectures and interactive discussions to clarify concepts and address participants' queries.
- Pre and Post Online Assessments for self-evaluation of learning during the programme.
- Hard Copies of Study Material to be provided to all registered participants.
- Certificate of Participation (Hard Copy) to be awarded to all registered participants as per their Pre & Post Lunch Session attendance.

