PHFI INSTITUTE of PUBLIC HEALTH SCIENCES
Hyderabad | Bhubaneswar | Bengaluru

Training Report

Title – Clinical Epidemiology

Course Dates – 09 to 12 March 2026

Name of Course Instructor/Co-trainers: Dr.Raghupathy Anchala, Dr.Sirshendhu Chaudhuri, Dr.Nirupama A.Y, Dr.Varun Agiwal, Dr. Rajan Shukla

Topics Covered

- Evidence based medicine - Critical appraisal
- Interpretation of Systematic Reviews & Meta-Analysis
- Clinical decision making
- Evaluating biases in study designs (cohort, case-control, cross-sectional, and Randomized Controlled Trials)
- Risk factors – risk assessments
- Clinical trial outcomes
- Bias, Chance & Confounding
- Conceptual clarity on NNT (Number Needed to Treat) and NNH (Number
- Needed to Harm)
- Assessing the accuracy (sensitivity, specificity) of diagnostic tests
- Evaluating effectiveness of interventions and preventive strategies
- Analysing costs and benefits of healthcare interventions
- Testing quality improvement interventions and Outcome measurements

No. of participants trained: 15

Training Program Schedule

Components	Component wise brief of performed activities
Lectures	8 sessions – 1.5 hrs each
Hands on Training	8 sessions – 1.5 hrs each
Field Visits	N/A
Lab visits	N/A
Any other	N/A

Day	Focus Area	Activities
Day 1 10 am to 10.15 am: Introduction of the course: Dr Raghupathy Anchala 10.15 am to 10.30 am: Pre test 10.30 – 11.15: Dr Sirshendu – interactive lectures Tea break: 11.15 am to 11.30 am 11.30 am to 12.45 pm – Dr.Sirshendu interactive lectures Lunch break: 1 pm to 2 pm 2 sessions in the PM (2 pm to 3.15 pm and 3.30 to 4.30 pm) – case studies and group work 4.30 to 4.45 pm: wrap up and key learnings	Clinical question – how to frame? Evidence based medicine - Critical appraisal Introduction to interpretation of Systematic Reviews & Meta-Analysis Introduction of Interpretation of OR, HR, and confidence intervals (CI)	Pre-test in the morning Case studies ● Refining clinical question ● OR and CI ● HR and CI ● Approach to clinical decision making
Day 2 10 am to 10.15 am: Pre test 10.15 – 11.15: Dr Raghupathy– interactive lectures Tea break: 11.15 am to 11.30 am 11.30 am to 12.45 pm – Dr. Raghupathy– interactive lectures Lunch break: 1 pm to 2 pm 2 sessions in the PM (2 pm to 3.15 pm and 3.30 to 4.30 pm) – case studies and group work 4.30 to 4.45 pm: wrap up and key learnings	Evaluating biases in study designs (cohort, case-control, cross-sectional, and Randomized Controlled Trials) Bias, Chance & Confounding Risk factor assessment	Case studies Group work
Day 3 10 am to 10.15 am: Pre test	Clinical Trials ● Types ● FDA & Drug trials ● Interpretation of results	Case studies Hands on exercises

10.15 – 11.15: Dr Nirupama– interactive lectures Tea break: 11.15 am to 11.30 am 11.30 am to 12.45 pm – Dr Nirupama– interactive lectures Lunch break: 1 pm to 2 pm 2 sessions in the PM (2 pm to 3.15 pm and 3.30 to 4.30 pm) – case studies and group work 4.30 to 4.45 pm: wrap up and key learnings	• Clinical trial and outcomes: Conceptual clarity on NNT (Number Needed to Treat) and NNH (Number Needed to Harm) Diagnostic & Screening Tests • Sensitivity, Specificity, Positive/Negative Predictive Values • Likelihood Ratios Screening Program - Evaluation • Wilson and Jungner criterion • Lead-time Bias, Length-time Bias, overdiagnosis • Population vs Individual-level Interpretation	
Day 4 10 am to 10.15 am: Pre test 10.15 – 11.15: Dr Rajan Shukla– interactive lectures Tea break: 11.15 am to 11.30 am 11.30 am to 12.45 pm – Dr Rajan Shukla– interactive lectures Lunch break: 1 pm to 2 pm 2 sessions in the PM (2 pm to 3.15 pm and 3.30 to 4.30 pm) – case studies and group work 4.30 to 4.45 pm: wrap up and key learnings	Analysing costs and benefits of healthcare interventions Testing quality improvement interventions and Outcome measurements Evaluation of the effectiveness of treatment and prevention medicines	Case studies Hands on exercises Post test

Faculty Utilization

S.No.	Name of Faculty	Designation	Specialization	No. of teaching hours
1	Dr.Raghupathy Anchala	Dean Academics	Epidemiology	8
2	Dr.Sirshendu Chaudhuri	Associate Professor	Epidemiology	8
3	Dr.Nirupama AY	Assistant Professor	Clinical trials	4
4	Dr.Varun Agiwal	Assistant Professor	Biostatistics	4
5	Dr. Rajan Shukla	Dean PH Practice	Health Economics	8

Visiting Faculty - None

Summary of Training provided with photographs

Feedback of students (Learning Outcomes)

- Evidence based medicine importance, Bias.
- Learned new things like forest plot, number needed to treat which is very useful Learned about evidence based medicine relevant for decision making
- The course enhanced my understanding of clinical epidemiology concepts such as interpreting forest plots in meta-analysis, identifying different types of bias in research, and the role of economic evaluation in evidence based decision making.

- I have learnt how to interpret the SRMA how to analyse a paper and effectiveness of tests whether the test is good or bad
    1) Evidence based medicine 2) interpretation of casual inference 3) Economic evaluation in Research
- Learnt how to apply epidemiology in clinical practice and knowledge about economic evaluation
- Evidence based medicine in Clinical Epidemiology, Hands on workshop on Bias. Economic evaluation in depth.
- Difference between epidemiology and clinical epidemiology Use of economic evaluation in clinical epidemiology
- Application of Evidence-Based Public Health, Understanding Epidemiological Concepts
- Learned about different study designs, bias and errors
- It helps to apply epidemiology in clinical field and clarity on health economics
- I have learned about clinical epidemiology and knowledge on knowing how it applies
- It will help me to work with my project

Recommendations

- Time duration
- More Hands on Practice.
- More Practical Examples
- Few more hands on training based on real world evidence
- More discussions and video presentation
- Including more industry focused training and practical applications could further help to understand how these concepts are applied in real-world research and public health settings.

Feedback of Course Instructor/Co trainers (challenges faced and recommendations)

Wrong audience for a clinical epidemiology course, not even a single participant for whom the course is ideally meant for, the clinicians.

Debrief session highly recommended for the course instructors and training division on how to improve on it, being more selective with the participant profiles, adequate promotion for the target audience.

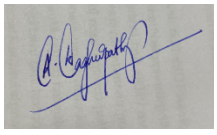
Areas of Improvement (effectiveness of course)

More marketing strategies to be implemented by the institute for reaching out to outside participants.

Certificate

Statement of Expenditure

S.No.	Description	Income(INR)	Expense(INR)	Balance(INR)
1	Registration fees	39200		
2	Snacks		3555	35645
3	Tea & Coffee		1200	34445
4	Lunch		4200	30245
5	Notepad		182	30063
6	Pen		140	29923
7	A4 size bundle		250	29673
8	Certificates		750	28923
	Total	**39200**	**10277**	**28923**



30 March 2026

Signature of Course Coordinator with date **Signature of Head-Training Committee with date**