Design & Analysis of
Cluster Randomised and Stepped Wedge Trials

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**Short Course
10 - 14 June 2024**

Overview

This course will provide attendees with a clear understanding of how to design and analyse cluster randomised trials and stepped wedge trials. Cluster randomised trials and stepped wedge trials are increasingly used to evaluate health and social interventions. This course will cover all aspects of designing and analysing these trials. This includes the rationale for using these designs, specific design issues, the randomisation process, sample size calculations, analytical methods, ethical considerations, trial reporting, and interpretation. We will include case studies from low, middle and high-income settings. Participants will gain practical experience of data analysis using the computer package Stata.

Course objectives

By the end of this course, attendees will be able to critique and apply a range of appropriate design approaches and analytical methods for cluster randomised and stepped wedge trials. The course will cover:

- Key concepts of cluster randomised trials, including measures of between-cluster variation and the rationale for cluster randomisation

- Design of cluster-randomised trials, including stratification and randomisation procedures

- Calculation of sample size

- Analysis of cluster randomised trials using both cluster-level summaries and individual-level data (random effects models and generalised estimating equations)

- Design and analysis of stepped wedge trials

- Ethical considerations, data monitoring and reporting of CRTs

Teaching methods

The course will have a hybrid format and students can choose to attend in person in London or online. Teaching will take place through a blend of lectures and hands-on, live, practical sessions. There will be a strong emphasis on the practical exercises where participants will have hands-on experience using Stata to analyse illustrative datasets from a variety of trials. The course will take place from approximately 9:30am to 5.00pm British Summer Time (BST).

Entry requirements

We require students to have a working knowledge of standard statistical methods used in epidemiological analyses (e.g. linear, Poisson and logistic regression) and of clinical trials. The course is taught in Stata. Detailed explanations of how to implement the methods in Stata will be provided, but applicants should have basic knowledge of Stata. Applicants should have a good command of English.

Attendance

This short course is studied on a full-time basis for one week. The course will have a hybrid format and students can choose to attend in person in London or online.

Key information

Course organisers:
Jennifer Thompson, John Bradley

Fees for 2024:
£1,528 full fee; £764 for LMICs

Contact email:
shortcourses@lshtm.ac.uk

Find out more and apply:
www.lshtm.ac.uk/study/courses/
short-courses/cluster-randomised-trials