



EVIDENCE SYNTHESIS
IRELAND



Cochrane
Ireland

Advanced Meta-Analysis for Effectiveness Systematic Reviews

Background

Health care policy and practice decisions should be based on a synthesis of the global body of evidence rather than relying on individual studies. Cochrane Ireland and Evidence Synthesis Ireland promote evidence based healthcare policy and practice by supporting high quality, relevant systematic reviews and other synthesised research evidence.

Aim

This workshop provides authors, actively involved in conducting a systematic review, with confidence to assess a wide range of data types. It offers an insight into more complex methods of meta-analysis.

Learning outcomes

In this course participants will be enabled to:

- Understand how to identify, extract and analyse dichotomous and continuous data
- Understand more complex meta-analysis methods including use of Generic Inverse Variance Meta-analysis
- Understand principles of analysis of multi-arm trials, cluster and cross-over trial designs

Teaching Strategies

This course consists of online workshops with of a mixture of short presentations, small group activities and practical demonstrations using Cochrane software (RevMan Web). In addition, participants will have access to Cochrane Interactive Learning modules and will be required to complete a set of modules prior to workshops. Access to the Cochrane Interactive Learning modules will be made available for 4 weeks before and 4 weeks after the workshop and will be free of charge thanks to the support of Cochrane Training.

Date:

**1st, 2nd, 8th & 9th
December 2025**

Time:

10:00 – 13:00 Irish time

Venue:

Online

Skill Level:

Advanced

Target Audience:

Healthcare professionals, academics, researchers, decision makers and Evidence Synthesis Ireland fellows who are actively involved in performing a Cochrane systematic review.

Facilitators:

Prof Valerie Smith

University College Dublin

Dr Nuala Livingstone

Senior Quality Assurance Editor, Cochrane Editorial and Methods Department

No. of attendees:

25

Registration fee:

General €150

Student €80



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Schedule

Day 1 – Monday 1st December	
10:00	Welcome, introduction of presenters and outline of presentations
10:15	Data Collection Overview
11:00	Dichotomous Data
11:30	Break
11:45	Continuous Data
12:30	Practical Exercises and Questions
13:00	Close
Day 2 – Tuesday 2nd December	
10:00	The generic inverse variance method of meta-analysis
10:45	Practical exercise
11:15	Break
11:30	Dichotomous data with zero and small counts
11:45	Converting other data types to binary form
12:00	Calculating standard deviations when they are missing from papers, using other reported values
12:30	Practical exercise and questions
13:00	Close



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Day 3 – Monday 8th December

10:00	Heterogeneity – Fixed and Random models
10:45	Exploring and responding to Heterogeneity
11:30	Break
11:45	Sensitivity Analysis
12:30	Questions and Discussion
13:00	Close

Day 4 – Tuesday 9th December

10:00	Multi-arm Trials
10:45	Cluster design trials and Cross-over Trials
11:30	Break
11:45	Time-to-event data and Rates
12:30	Practical exercise and questions
13:00	Close



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