Systematic reviews and meta-analysis: two-day workshop

Date/time: 6 - 7 November, 9 am – 4.30 pm

Venue: Room 303, Building ND4, Freemantle Campus, University of Notre Dame

Facilitator: Joanne McKenzie, School of Public Health and Preventive Medicine, Monash University
Sue Brennan, Cochrane Australia and Melbourne GRADE Centre, Monash University
Natalie Strobel, Centre for Research Excellence in Improving health services for Aboriginal and Torres Strait Islander children (ISAC), University of Western Australia
Max Bulsara, Institute for Health Research, University of Notre Dame

What to bring: Course materials, including slides, will be provided electronically at the workshop. Wi-Fi available.

Course description and topics covered:

This short course provides a detailed introduction to the methods involved in conducting a systematic review of interventions, and enables participants to plan and commence a review of their own.

The course takes a step-by-step approach to the tasks and methods involved in planning and conducting a systematic review to answer a question about the effects of a health-related intervention, from a simple drug treatment to a complex public health or health systems intervention. The course provides participants with practical skills required to plan and commence a review of their own.

Outline

- Getting started with a systematic review and defining your review questions
- Searching for and selecting studies
- Collecting data and assessing risk of bias of included studies
- Analysing continuous and dichotomous outcomes
- Introduction to meta-analysis
- Interpreting results and drawing concluding using the GRADE framework

The workshop involves a mix of presentations, interactive examples and hands-on exercises to introduce participants to the main aspects of the review process. Participants are encouraged to identify a topic for a systematic review that they can develop during hands-on sessions.

Cost

The workshop is AUD $880 per participant (20% discount for post-graduate students). A light lunch, morning and afternoon tea is included. Sponsored registrations may be available for participants from the **Institute of Health Research, University of Notre Dame** - contact Max Bulsara (Max.Bulsara@nd.edu.au). A limited number of sponsored registrations are available for participants from the **NHMRC CRE ISAC** - email Natalie Strobel (natalie.strobel@uwa.edu.au) with a short expression of interest outlining how attending this course will help you and address ISAC aims of improving the health and developmental outcomes of Aboriginal and/or Torres Strait Islander children in Australia through improvements in health services.

To register. https://www.eventbrite.com.au/o/cochrane-australia-12850419644

Synthesis and presentation of findings in reviews of complex interventions: one-day workshop

Date/time: Thursday 8 November, 9 am – 4.30 pm

Venue: The University Club of Western Australia, Entrance 1 Hackett Dr, Crawley WA 6009

Facilitator: Joanne McKenzie, School of Public Health and Preventive Medicine, Monash University
Sue Brennan, Cochrane Australia and Melbourne GRADE Centre, Monash University
Natalie Strobel, Centre for Research Excellence in Improving health services for Aboriginal and Torres Strait Islander children ISAC), University of Western Australia

What to bring: Course materials, including slides, will be provided electronically at the workshop, so you may wish to bring a laptop or tablet. Wi-Fi available.

Course description and topics covered:

This one-day course for systematic review authors provides guidance on methods to maximise the potential for synthesis in reviews of complex interventions. Scenarios that preclude the use of meta-analysis are common in reviews that address broad questions, especially those evaluating public health, health services, and consumer-oriented interventions. Diversity in the interventions, outcomes, populations or study designs included in these reviews can lead to sparse data to undertake the planned synthesis; and incomplete or inconsistent reporting of effect estimates often prevents meta-analysis. Planning for these scenarios during protocol development can ensure that reviewers make best use of available data and produce more a useful synthesis for decision makers.

Outline

- The importance of synthesis from a decision-makers' perspective
- Scenarios that (may) preclude synthesis
- Structuring reviews to facilitate synthesis: practical approaches for grouping studies and the use of taxonomies, frameworks and logic models
- Methods for summarising, presenting and synthesising data when meta-analysis is not possible
- Reporting your synthesis methods and results

The workshop involves a mix of presentations, interactive examples and hands-on exercises to explore different approaches to synthesis. The course assumes familiarity with basic systematic review methods.

Cost

The workshop is AUD $440 per participant. A light lunch, morning and afternoon tea is included. A limited number of sponsored registrations are available for participants from the **NHMRC CRE ISAC** - email Natalie Strobel (natalie.strobel@uwa.edu.au) with a short expression of interest outlining how attending this course will help you and address ISAC aims of improving the health and developmental outcomes of Aboriginal and/or Torres Strait Islander children in Australia through improvements in health services.

To register. https://www.eventbrite.com.au/o/cochrane-australia-12850419644

Meta-analysis methods for randomised trials - beyond the basics: one-day workshop

Date/time: Friday 9 November, 9 am – 4.30 pm

Venue: The University Club of Western Australia, Entrance 1 Hackett Dr, Crawley WA 6009

Facilitator: Joanne McKenzie, School of Public Health and Preventive Medicine, Monash University
Natalie Strobel, Centre for Research Excellence in Improving health services for Aboriginal and Torres Strait Islander children (ISAC), University of Western Australia
Max Bulsara, Institute for Health Research, University of Notre Dame

What to bring: Please **bring a laptop computer** for practical exercises (or share with a colleague). Course materials, including slides, will be provided electronically at the workshop. Wi-Fi available.

Course description and topics covered:

This one-day course for practising biostatisticians and quantitative health researchers will provide guidance on meta-analysis methods beyond the basics. While conceptually simple, in practice many complexities arise when applying meta-analysis methods. For example, meta-analyses may include: trials that report non-parametric statistics; trials which have used a range of statistical methods to estimate the intervention effect; and non-standard trials. In this workshop we will address some of these complexities. Further, we will cover extensions to meta-analysis that provide opportunities to explore which factors predict variability in the magnitude and direction of intervention effects, and we will present graphical and statistical techniques for examining reporting biases.

Using a mix of presentations, practical exercises (using Stata) and discussion, the course will cover the following topics:

Outline

- Introduction to meta-analysis
- Meta-regression and subgroup analysis
- Dealing with issues arising in meta-analysis of continuous outcomes
- Investigation of reporting biases
- Meta-analysis of non-standard randomised trials

The course assumes familiarity with the basics of meta-analysis, although an introductory lecture will be provided.

Cost

The workshop is AUD $440 per participant. A light lunch, morning and afternoon tea is included. A limited number of sponsored registrations are available for participants from the **NHMRC CRE ISAC** - email Natalie Strobel (natalie.strobel@uwa.edu.au) with a short expression of interest outlining how attending this course will help you and address ISAC aims of improving the health and developmental outcomes of Aboriginal and/or Torres Strait Islander children in Australia through improvements in health services.

To register. https://eventbrite.com.au/e/meta-analysis-methods-for-randomised-trials-beyond-the-basics-one-day-workshop-registration-50722675889

Using the GRADE approach to summarise evidence for policy and practice: one-day workshop

Date/time: Friday 9 November, 9 am – 4.30 pm

Venue: The University Club of Western Australia, Entrance 1 Hackett Dr, Crawley WA 6009

Facilitator: Sue Brennan, Cochrane Australia and Melbourne GRADE Centre, Monash University

What to bring: Please **bring a laptop computer** for practical exercises (or share with a colleague). Course materials, including slides, will be provided electronically at the workshop. Wi-Fi available.

Course description and topics covered:

This one-day course is designed for systematic review authors and others involved in evidence syntheses. It covers the main principles of the GRADE (Grading of Recommendations Assessment, Development and Evaluation) approach and provides practical guidance on using the methods to summarise evidence for policy and practice. GRADE has become the gold standard approach for summarising findings in systematic reviews and rating the certainty of a body of evidence. Recommended for use in Cochrane reviews and NHMRC-approved guidelines, GRADE provides a transparent method for making the complex decisions required to draw conclusions about the certainty of evidence.

This workshop provides participants with practical skills required to start using the GRADE approach in a systematic review or guideline. The course assumes some familiarity with systematic review methods, in particular the assessment of risk of bias and the interpretation of effect estimates

Outline

- Overview of the GRADE approach and systematic reviews
- Assessing the certainty of evidence using GRADE
- Creating 'Summary of Findings' tables and Evidence Profiles from systematic reviews of interventions
- Software to support the use of GRADE
- Applying GRADE in more complex scenarios

The workshop involves a mix of presentations, interactive examples and hands-on exercises. Electronic copies of the slides are provided at the workshop. Participants require a Wi-Fi enabled laptop or tablet for GRADEPro GDT training.

Cost

The workshop is AUD $368 per participant with discounts for group tickets. A light lunch, morning and afternoon tea is included. A limited number of sponsored registrations are available for participants from the **NHMRC CRE ISAC** - email Natalie Strobel (natalie.strobel@uwa.edu.au) with a short expression of interest outlining how attending this course will help you and address ISAC aims of improving the health and developmental outcomes of Aboriginal and/or Torres Strait Islander children in Australia through improvements in health services.

To register. https://www.eventbrite.com.au/o/cochrane-australia-12850419644

Course enquiries: contact sue.brennan@monash.edu

About the facilitators:

Jo McKenzie is a Senior Research Fellow (Biostatistician) at the School of Public Health and Preventive Medicine, Monash University. She has holds an NHMRC Career Development Fellowship and leads a programme of research on methods for evidence synthesis within the Biostatistics Unit. She has been affiliated with Cochrane Australia since 2003, and is an active contributor to Cochrane, including being a Co-Convenor of the Statistical Methods Group and a co-author of the forthcoming Cochrane Handbook for Systematic Reviews of Interventions chapters on 'preparing for synthesis' and 'synthesis when meta-analysis is not possible'. Her research interests in evidence synthesis include examination of approaches for meta-analysing results from interrupted time series studies; methods for overviews of systematic reviews, including how to assess the certainty of evidence in overviews; methods for presenting and synthesising results when meta-analysis is not possible; methods to synthesise evidence from multiple treatments (also known as network meta-analysis); and examination of bias in the systematic review process.

Sue Brennan has a PhD in Public Health and is a Research Fellow at Cochrane Australia, School of Public Health and Preventive Medicine, Monash University, where she contributes to work supporting the translation of research into policy and practice. She has a long standing interest in synthesis methods that enable policy decision-making, with a focus on complex reviews and overviews of systematic reviews. Sue is the Director of the Melbourne GRADE Centre (www.melbournegradecentre.org), is co-lead on research to develop GRADE guidance for overviews, and is a co-author of forthcoming Cochrane handbook chapters on 'preparing for synthesis' and 'synthesis when meta-analysis is not possible'. She has authored reviews of public health and healthcare improvement interventions, and has published research on enabling the use of research in policy.

Natalie Strobel is a Research Fellow employed as the team leader on the evidence synthesis stream of the NHMRC Centre for Research Excellence in Improving Health Services for Aboriginal and Torres Strait Islander Children (ISAC) at the University of Western Australia. She is also a Master of Applied Epidemiology Scholar at the Australian National University. Since completing her PhD she has been working to improve evidence-based best practice within health services focusing on primary prevention and early detection, particularly for Aboriginal and disadvantaged children. Her research interests include evidence synthesis methods for complex interventions, making sure evidence is relevant to policy and practice, and ensuring families and health service providers have a voice within reviews.

Max Bulsara is a Professor of Biostatistics at the Institute for Health Research, University of Notre Dame. Max has over 30 years' experience collaborating on epidemiological studies covering a diverse range of topics. These collaborations have resulted in over 250 published scientific articles and 15 book chapters and technical reports. Max has served as an NHMRC panel member for multiple schemes, undertakes peer-review for national and international journals, and is an Associate Editor for Open Access Medical Statistics. He is on the Editorial Board of the BMC Public Health Journal, BMC Medical Research Methodology Journal, BMC Proceedings Journal, Cochrane Acute Respiratory Infections Group and Cochrane Breast Cancer Group, Journal of Medical Statistics and Informatics.

About us

These workshops will be led by staff from Cochrane Australia and the School of Public Health and Preventive Medicine, Monash University, with support from the Institute for Health Research, University of Notre Dame, and the Centre for Research Excellence in Improving health services for Aboriginal and Torres Strait Islander children (ISAC), University of Western Australia.

MONASH University

The School of Public Health and Preventive Medicine (SPHPM) at Monash University is one of Australia's largest public health research groups with expertise in large epidemiological studies, multicentre clinical trials, clinical registries, evidence synthesis and health social science. The Biostatistics Unit housed within the SPHPM, is one of the largest nationally, with an active methodological research program, including research on systematic review methods.

Cochrane (www.cochrane.org) is a global, independent, not-for-profit organisation that produces trusted health information in the form of systematic reviews (published in the Cochrane Library). Cochrane Australia (www.cochrane.org.au) supports contributors to Cochrane and others involved in evidence synthesis, primarily by providing education and learning opportunities. We also undertake research, consultancy, advocate for evidence-informed health policies and practices, and foster local engagement with the global Cochrane network.

The Melbourne GRADE centre (www.melbournegradecentre.org) is part of Cochrane Australia and acts as a regional base for the GRADE working group in Australia. The centre provides training and support for systematic review authors and those developing health guidance in the use of GRADE methods for rating the certainty of evidence and developing recommendations.

The Institute for Health Research (IHR), based on the Fremantle Campus, is one of three research institutes established by The University of Notre Dame Australia to provide leadership in collaborative research initiatives.

Drawing on the clinical expertise within the Schools of Health Science (biomedicine, outdoor recreation, health and physical education, preventive health, and exercise and sport science), Medicine, Nursing & Midwifery and Physiotherapy, the IHR seeks to facilitate and promote health-related research at a higher education level.

In addition to developing research capacity within Notre Dame, the IHR also seeks to foster interdisciplinary, cross-Campus and cross-institutional research partnerships to develop research projects that support government policy and clinical practice that improve outcomes for:

- individuals (mental, physical and spiritual wellbeing)
- communities, and
- the overall healthcare system.

The NHMRC Centre for Research Excellence in Improving Health Services for Aboriginal and Torres Strait Islander children (ISAC) brings together national and international researchers to focus on proximal issues in delivery of Aboriginal and Torres Strait Islander child health services.