

Systematic Reviews and Meta-analyses – Program (*Preliminary*)
18-20 Feb, 2019

University of Wollongong - South Western Sydney Campus, 33 Moore St, Liverpool

Time	Activity L – Lecture; P – Practical	Content covered
Day 1, Feb 18 2019		
9:00 – 9:30	Welcome and Introduction	Registration Introduction to course and presenters Overview of course content
9:30 – 10:40	L1. Systematic reviews – part 1	What are systematic reviews (SRs)? Registering review protocols Planning for reporting SRs (PRISMA)
10:40 – 11:00	<i>Morning tea</i>	
11:00 – 11:45	L2. Systematic reviews – part 2	Defining research questions and eligibility criteria
11:45 – 13:00	P1. Systematic search of the literature	Constructing and deploying a search strategy (PubMed) Reference management
13:00 – 13:45	<i>Lunch</i>	
13:45 – 14:40	L3. Systematic reviews – part 3	Study selection Data extraction for summary tables
14:40 – 15:00	<i>Afternoon tea</i>	
15:00 – 16:30	P2. Risk of bias (RoB) assessment	Assessing risk of bias with Cochrane’s RoB tool
Day 2, Feb 19 2019		
9:00 – 10:20	L4. Meta-analysis – part 1	Data extraction and meta-analysis - effect measures for dichotomous outcomes - effect measures for continuous outcomes
10:20 – 10:30	<i>Morning tea</i>	
10:30 – 12:30	L5. Meta-analysis – part 2	Pooling data - fixed effect vs random-effects Quantification of heterogeneity Ascertaining and dealing with publication/small study bias
12:30 – 13:15	<i>Lunch</i>	
13:30 – 16:30	P3. Meta-analyses (hands-on-computer, with STATA) ***	Data extraction from 2-3 selected papers; - effect measures for dichotomous outcomes - effect measures for continuous outcomes Assembling a dataset for meta-analysis; Pooling and displaying data (forest plots), with fixed effect and random effects models; - appreciation of effect sizes, predictive intervals and heterogeneity (I^2) Ascertaining risk of (small-study/publication) bias in meta-analyses - inverted and contour enhanced funnel plots

Day 3, Feb 19 2019		
9:00 – 10:00	L6. Dealing with and explaining heterogeneity	Subgroup and meta-regression analyses
10:00 – 10:20	<i>Morning tea</i>	
10:20 – 11:00	L7. How to deal with missing data?	Complete cases vs intention-to-treat analyses Best vs worst-case scenarios
11:00 – 12:45	P4. Meta-analyses (hands-on-computer, with STATA) ***	Subgroup analysis vs meta-regression - results and interpretation Meta-analysis with missing data - retrieving estimates for best and worse-case scenarios
12:45 – 13:30	<i>Lunch</i>	
13:30-14:30	L8. How to deal with multiple outcomes and multiple treatments?	Multivariate and network meta-analysis
14:30-15:30	P5. Meta-analyses (hands-on-computer, with STATA) ***	Demonstration of analyses of datasets with: - multiple (correlated) outcomes - multiple treatment arms
15:30 – 16:00	L9. Assessing the quality of the body of evidence to inform the development of guidelines and evidence-based practice	Use of Grading of Recommendations Assessment, Development and Evaluation (GRADE) to determine the quality of the body of evidence
16:00 – 16:30	<i>Course review and closure</i>	
16:30-17:00	<i>Drinks!</i>	

***Datasets and code used in all practical activities will be provided;