# Introduction to Systematic Reviews and Critical Appraisal

Centre for Reviews and Dissemination, University of York

# **COURSE OUTLINE**

May 2025

# Module 0: Introduction and orientation

<b>Video</b>	Live workshop	<b>Discussion board</b>	Total estimated
5 mins	120 mins	15 mins	learning time
			140 mins

#### Thursday 8th May, 2025

# Pre-module

Video: Introducing the course

# Live workshop

# 10.00 – 12.00 [UK time]

- o Welcome and introduction
- o Orientation to the platforms and technology we will be using
- o Socialisation: meet your tutors and other learners
- o Sharing exercises: what would you like to get out of the course
- o Information about support
- o Introduction to course homework

# Post-module

Discussion board:

- o What are your research questions?
- o Any questions, feedback or technical support?

# Module 1: Developing the review question and protocols

Live workshop 1	Live workshop 2	Total estimated
80 mins	30 mins	learning time
		80 + optional 30 mins

# Monday 12<sup>th</sup> May, 2025

#### Live workshop 1

#### 9.30 - 10.50 [UK time]

- o Presentation: PICOS and review questions
- o Group exercises: PICOS and analysing a review question
- o Presentation: Review protocols; registering a review protocol
- o Question and answer session

# Live workshop 2

# 10.50 - 11.20 [UK time]

- o OPTIONAL review questions clinic
- o Opportunity to discuss your review questions with our experts

#### Post-module

Resource: Information on registering a review on PROSPERO

- o Any questions, feedback or technical support?
- o Read in your own time

# Module 2: Literature searching

<b>Videos</b>	Live workshop	Total estimated
45 mins	60 mins	learning time

# Tuesday 13<sup>th</sup> May, 2025

#### Pre-module

Videos: Introduction to and importance of literature searching

# Live workshop

9.30 – 10.30 [UK time]

- o Group exercise: search strategy quiz
- o Presentation: Beyond Medline why search extensively?
- o Presentation: Take home messages
- o Question and answer session

# Post-module

Resource: Further learning materials

- o MeSH terms, term harvesting; databases; search strategies
- o Read in your own time

# Module 3: Study selection

<b>Videos</b>	Live workshop				Total estimated
20 mins	120 mins				learning time

# Tuesday 13<sup>th</sup> May, 2025

# Pre-module

Videos: Introducing study selection and group exercise

# Live workshop

# 10.50 – 12.50 [UK time]

- o Group exercises: screening based on titles and abstracts
- o Presentation: common issues and tips
- o Question and answer session

# Module 4: Data extraction

<b>Videos</b>	<b>Pre-module prep</b>	<b>Live workshop</b>	Total estimated
20 mins	45 mins	90 mins	learning time
			170 mins

#### Wednesday 14<sup>th</sup> May, 2025

## Pre-module

Videos: Introducing data extraction; Designing and testing a data extraction form

# Pre-module Prep:

- o Download and read three papers to prepare for data extraction exercise
- o Download and read example data extraction form

# Live workshop

# 9.30 - 11.00 [UK time]

- o Group exercise: data extraction exercise
- o Follow-up discussion and summary
- o Presentation: Common issues
- o OPTIONAL 'Ask the expert' brief session

# Module 5: Critical appraisal of included studies

<b>Videos</b>	Pre-module prep	Live workshop	Total estimated
75 mins	30 mins	60 mins	learning time

Thursday 15<sup>th</sup> May, 2025

#### Pre-module

Videos: Internal validity, external validity and critical appraisal issues

# **Pre-module Prep:**

- o Read instructions and paper for critical appraisal exercise
- o Discussion board questions or support about paper and instructions

# Live workshop

# 9.30 - 10.30 [UK time]

- o Group exercise: appraise a set of provided vignettes and identify bias
- o Discussion, feedback, Q&A on bias exercise

# Module 6: Calculating treatment effects

<b>Videos</b> 15 mins	Live workshop 60 mins	Total estimated learning time
		75 mins

# Thursday 15<sup>th</sup> May, 2025

# Pre-module

Video: Introducing treatment effects

# Live workshop

11.00 – 12.00 [UK time]

- o Group exercise: calculating effects estimate
- o Discussion, feedback, Q&A

# Module 7: Meta-analysis



#### Friday 16<sup>th</sup> May, 2025

#### Pre-module

Videos:

- o Introduction to meta-analysis
- o Issues in meta-analysis heterogeneity
- o Problems for meta-analysis missing studies, publication bias
- o Why not always do a meta-analysis narrative synthesis

# Practical Exercise:

o Exercise: Conduct a meta-analysis

# Monday 19<sup>th</sup> May, 2025

# Live workshop for technical help

11.30 – 12.30 [UK time]

o 'Ask the expert' clinic for questions about the practical exercise

# Tuesday 20<sup>th</sup> May, 2025

# Live workshop

9.30 – 11.30 [UK time]

- o Group exercise: Interpreting meta-analysis results
- o Q&A Session

# Module 8: Reporting your review

Videos	Total estimated
30 mins	learning time
	30 mins

# No live session

# In your own time learning

Videos:

- o Reporting review findings
- o Writing the discussion
- o Checklists and guidance for reporting your review

# Resources:

- o Resources for reporting and writing the discussion
- o Resources on reporting guidelines

# Module 9: GRADE

<b>Videos</b>	Live workshop	Total estimated
60 mins	125 mins	learning time

#### Wednesday 21<sup>st</sup> May, 2025

# Pre-module

Videos:

- o Estimate vs. uncertainty of an outcome
- o About GRADE and SoF tables
- o Completing a GRADE assessment
- o Communicating findings
- o Relative vs. absolute risk

# Live workshop

# 9.30 - 11.35 [UK time]

- o Group exercise: GRADEing of a Zinc supplementation review
- o Group exercise: Conclusions based on GRADE assessment
- o Presentation: Completing GRADE assessment
- o 'Ask the expert' clinic follow-up questions from exercise, other questions about GRADE assessment

# Module 10: Critical appraisal of a systematic review

<b>Live workshop</b>	Total estimated
90 mins	learning time
	90 mins

# Thursday 22<sup>nd</sup> May, 2025

#### Live workshop

10.00 – 11.30 [UK time]

- o Group exercise: What makes a good systematic review
- o Group exercise: Using critical appraisal checklists

# Module 11: Introduction to health economics

Live workshop	Total estimated
60 mins	learning time
	60 mins

# Friday 23<sup>rd</sup> May, 2025

# Live workshop

9.30 - 10.30 [UK time]

- o Live presentation: Key concepts, challenges and relevance to systematic reviews
- o 'Ask the expert' Q&A and discussion

# Module 12: Knowledge mobilisation

<b>Videos</b>	Live workshop	Total estimated
35 mins	60 mins	learning time

# Friday 23<sup>rd</sup> May, 2025

# Pre-module

Videos:

- o The what, why and who of knowledge mobilisation
- o When knowledge mobilisation happens
- o How knowledge mobilisation happens

# Pre-module Prep:

Read case study to prepare for practical task

# Live workshop

10.50 – 11.50 [UK time]

- o Group exercise: stakeholder mapping
- o Group exercise: Reviewing types of knowledge mobilisation outputs; what does it mean to 'use evidence'?

# **COURSE CLOSE**