COURSE DESCRIPTION

In this course health care providers and researchers learn to systemically review evidence for health care practices and beliefs. The classes are beneficial for people commencing postgraduate research degrees, as review outcomes can be integrated into introductory arguments in a research thesis, and for clinicians who want to update their skills in reading and interpreting scientific literature. Participants learn to refine a clinical or research question, comprehensively search for relevant scientific literature and other information, evaluate research validity and quantify intervention effects, and summarise findings. Classes are small and interaction and discussion are encouraged. Primary care clinicians and researchers across health care professions will benefit from and enjoy this unit.

This course aims to:
• Provide a structure opportunity for health care workers to develop research skills
• Develop skills in research design and critical analysis of literature.
• Develop skills relevant to publishing papers in peer reviewed journals.
• Develop expert knowledge in the science and theories underpinning health care and clinical practices.

Subject coordinator:
Professor Roslyn Boyd
r.boyd@uq.edu.au
Phone: 07 3365 5315

In order to maximise your education in this area, three additional experts in the field will contribute to the course: Professor Jenny Keating (Head, School of Physiotherapy, Monash University), Biostatistician Dr Rob Ware (School of Population Health, The University of Queensland), and Dr Leanne Sakzewski (NHMRC Translation of Research into Practice Fellow, School of Medicine, The University of Queensland). Lars Eriksson, a staff librarian from the Herston Medical Library will also provide comprehensive training on referencing software Endnote, and on systematic online searching.

Location:
Herston Medical Library, Training room, Level 6, Block 6, Royal Brisbane and Women’s Hospital

Please be punctual as the sessions are comprehensive. If you miss a session it will be your responsibility to make the session up (a video recording of the lecture may be available but as all the sessions include hands on computer experience it is best not to miss a session)

All notes and afternoon tea will be provided.

Course Administration:
Angie Strelow/Tiina Lammervo
Email: qcprrc@uq.edu.au
Phone: 07 3646 5542
ESSENTIAL information:
• You MUST bring a USB or portable hard drive in order to save your searches during your library sessions; it will not be possible to print any documents.
• You are able to bring your own laptop if it has wireless connection and access to the UQ logon/UQ library. Please let Angie/Tiina know if you wish to do this.
• All Queensland Health employees will need internet access with their Queensland Health log on, and also UQ Library access.

Library access:
If you do not have access to the UQ library and associated databases (UQ staff and students will have this access), please notify Angie/Tiina when registering.

Overview of timetable
Session times for 2015 below
Each week you will receive course notes, lecture, searching practical then statistical lectures and a folder of relevant current articles on the topic of the week. These will be distributed via Drop Box prior to each week’s session.

Course Dates: Wednesdays
1. 22 April 2-5pm
2. 29 April 2-5pm
3. 6 May 2-5pm
4. 13 May 2-5pm
Break to complete searches and data extraction ready for analysis
5. 15 July 1-4pm
6. 22 July 1-4pm
7. 29 July 1-4pm
8. 5 August 9.30am-4.30pm a FULL DAY of META-ANALYSIS
   Presented by Professor Jenny Keating

Course content for 2015 (Sessions 1-4)

Session 1: Deciding on your research question and type of review
2-3pm - Professor Roslyn Boyd
Meet the class
Describe the notes provided electronically to students
Introduce subject and session objectives
Discussion: Examples of different types of systematic reviews, Efficacy, Clinimetric and Diagnostic Accuracy
Describe Sackett’s 5 steps
Present guidelines for refinement of topics for review
Discuss how sources of bias can affect research results
Sources of bias and ways to conduct research that minimize bias
Describe the types of questions that can be answered by a systematic review
Selection bias, Outcome assessment bias and Attrition bias
Bias management in trial design
Procedure for bias reduction: Systematic evaluation processes
Level of evidence
The Cochrane Collaboration library
3-3.15pm - Break
3.15-5pm - Lars Eriksson
Library searching and Endnote
Session 2  
2-3pm - Professor Roslyn Boyd  
Defining review aims  
Developing inclusion and exclusion criteria  
How to search for information required for clinical decisions  
Simple searches (highly specific, not sensitive)  
Report refined review topic to the class and answer questions/feedback from class  

3-3.15pm Break  
3.15-5.00pm - Lars Eriksson  
Complex searches and a logical enquiry  
Where to search  
Saving search results  
Minimising bias in applying inclusion and exclusion criteria

Session 3  
2-3pm - Professor Roslyn Boyd  
Assessing the validity of included studies: PEDro scale  
Standardising the evaluation if trials that are included in your review  
Quality assessment checklist for assessing RCTs’ systematic reviews and other designs  
Data Extraction: what data do you want to extract from your included papers? What data is required to answer your research question?  
Designing a suitable set of questions to standardise the evaluation of papers that are included in your review  

3-3.15pm Break  
3.15-4pm - Professor Roslyn Boyd  
Outcome measures  
Ways that physiotherapists measure the effectiveness of their treatments  
(ICF) World Health Organization recommendations on monitoring patient health  
Utility of measurements of impairment compared with measurements of function  
How instruments for measuring outcome are developed  
Acceptable outcomes for studies included in a review  
Methods for evaluating the validity of outcomes measures  

4pm-5pm - Lars Eriksson  
EBP and systematic database search techniques: including search strategy formulation (Ebsco- database: Cinahl)

Session 4  
2-3pm - Lars Eriksson  
Systematic search techniques (Ovid SP – database: Medline)  

3-3.15pm - Break  
3.15-5pm - Professor Roslyn Boyd  
Continue to run searches (computerlab)  
Begin collecting hard copies of papers suitable for inclusion in the review  
Hypothesis testing and statistical analysis.  
Students to present their inclusion and exclusion criteria to the class

Sessions 5 – 8 information to follow
Sample Publications from earlier Systematic Review Courses


