

Introduction to Systematic Review Searching: Workshop Outline

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Time required: 3 hours including 15 minute break

Outcomes: By the end of the session participants will be able to:

1. Identify systematic reviews and distinguish them from other reviews,
2. Recognize the breadth of resources required to execute a systematic review search
3. Develop a well formulated search question and structure a search using the PICO format,
4. Know how to apply appropriate date, language and publication type limits,
5. Document a search in a standardized form,
6. Understand the importance of peer-review of systematic review searches,
7. Recognize the level of expert searching needed for a systematic review

Equipment required: Computer with Internet connection and PowerPoint, projector and screen, access to the required bibliographic databases, computer lab or laptops for students to access resources.

Instructors: approximately 1 instructor to 6 students

Materials: Handouts, sign-up sheet, floor-plan to note student names

Workshop Outline

Part 1. General Information and Introduction

1. Introduction of instructors and students
2. Distinguishing systematic reviews from other kinds of reviews
 - a. Method 1: Advance reading
 - i. "What is a Systematic Review"
 - ii. Arksey and O'Malley "Scoping Studies: Towards a Methodological Framework"
 - iii. Grant and Booth "A Typology of Reviews: an analysis of 14 review types and associated methodologies":
 - b. Method 2: Didactic and group discussion
3. Understanding the practical need for systematic reviews
 - a. Method: Didactic
4. Understanding the process of a systematic review and how the search process fits into it.
 - a. Method 1: Advance reading
 - i. Institute of Medicine of the National Academies. Finding What Works in Health Care Standards for Systematic Reviews, 2011.
 - b. Method 2: handout review – PRISMA chart.

Timing Point: 30 minutes

Part 2. How to Structure a Search Strategy

Sample Question : *In undergraduate medical education, does the use of clicker technology in the classroom improve learning outcomes?*

1. Replicability and defensibility
 - a. Method: Didactic
2. Systematic search distinguished from a systematic review
 - a. Method 1: Didactic
 - b. Method 2: Question and Answer
3. Steps to building a search strategy
 - a. Method 1: PowerPoint Slides,
 - b. Method 2: whole group interaction with example on slide
 1. Important concepts
 - a. Focus on step-by-step development of the search
 - b. Broad vs narrow terms
 - c. Conceptual synonyms
 - d. Using Subject Databases as an advance filter on the search

4. Applying methods to own research question.
 - a. Method 1: Hands-on worksheets: PICO form, Boolean Circles Diagram, Tips for Building a Better Search Strategy
 - b. Method 2: one-on-one interaction with participants

Timing Point: 1 hour

Part 3. Execution of the Search in Ovid Medline

1. Introduction to Search Skills
 - a. Method: Live demonstration (Example: clickers in the classroom)
 - i. Important concepts:
 1. Text word search with and without truncation
 2. One term per line search development
 3. Use of MeSH headings
 - a. Explode
 - b. Focus
 - c. Scope Notes (both for clarity and as a source of additional search terms.
 4. "OR" to combine concepts inside of one circle
 5. "AND" to combine circles and find the intersection
 6. Field search (eg: title and abstract)
 7. Limits (language, date, population, geographic)
 - ii. Search filters
 1. John W. Scott Library Health Science Search Filers
 2. York
 3. McMaster
 - iii. Creating an OVID account, saving and re-executing searches.
2. Search practice
 - a. Method 1: hands on
 - b. Method 2: One-on-one support and discussion of specific questions.
 - i. Transfer of searches from Boolean Circles to search
 - ii. Line-by-line development
3. Exporting Results to a Citation Manager and Citing in a Paper
 - a. Method 1: Pre-class work – Creating a RefWorks account
 - b. Method 2: PowerPoint Slides (step-by-step export and Write-n-Cite use)
 - c. Method 3: Hands-on practice exporting records from search.

Timing Point: 1 hour 30 minutes

Midpoint of the workshop

BREAK 15 Minutes (Depending upon the progress of the group, some participants may choose to continue searching through the break.)

Timing Point: 1 hour 45 minutes

Part 4. Types of Resources Searched for a Systematic Review

1. Review distinction between platforms and databases
 - a. Method: handout review - Searching Syntax Guide for Common Database Platforms

2. Review of Types of Databases
 - a. Method: PowerPoint Slides
 - i. Protocol Registers
 1. Prospero
 2. Cochrane/EBM ALL
 - ii. Clinical Trials Registers
 1. Cochrane
 2. Clinicaltrials.gov
 - iii. Bibliographic Databases Health and Other Areas
 1. Medline
 2. Embase
 3. CINAHL
 4. Nutrition Abstracts
 5. Sport Discus
 6. PsycInfo
 7. EconLit
 8. Environment Complete
 - iv. Citation Databases
 1. SCOPUS
 2. Web of Science
 3. Google Scholar
 - v. Grey Literature Databases Resources
 1. Proquest Dissertations and Theses Global
 2. OCLC Papers First
 3. Web of Science Core Databases

3. Review of Individual Databases
 - a. Method 1: Live demonstration (follow-along) and hands-on practice
 - b. Method 2: Alternative - PowerPoint slides
 1. SCOPUS (Elsevier)
 2. CINAHL (EBSCO platform)
 3. Proquest Dissertations and Theses Global (Proquest)

Timing Point: 2 hours 30 minutes

Part 5. Preparing for Publication and Session Wrap-up

1. Reviewing your search
 - a. Method: handout review - PRESS Checklist
2. Review of Structure of Methods Section for the paper
 - a. Method: PowerPoint Slides
3. Review of Search Documentation
 - a. Method: PowerPoint Slides - examples from published papers

Timing Point: 2 hours 50 minutes

4. Workshop Conclusion and Wrap-up
 - a. Distribution of Workshop Evaluation, certificates of attendance and Royal College CME credit letters
 - b. Question and answer

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Rev. November 13, 2015

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