

Primers in systematic reviews: enhancing capacity to **use** reviews



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Evidence-informed Practices

the conscientious, explicit and judicious use of the current best evidence in making decisions

Sackett DL, Richardson WS, Rosenberg W, Haynes RB. Evidence-based Medicine. 1997

Evidence-informed Practice requires that decisions about health care are based on the best available, current, valid and relevant evidence

Systematic review

“A review in which bias has been reduced by the systematic identification, appraisal, synthesis, and, if relevant statistical aggregation of all relevant studies on a specific topic according to a predetermined and explicit method.”

Moher et al. Lancet 1999; 354: 1896-900

*A readable unbiased transparent and up-to-date summary of **ALL** the evidence*

Number of existing systematic reviews



Trusted evidence.
Informed decisions.
Better health.

Cochrane.org

Browse Advanced Search

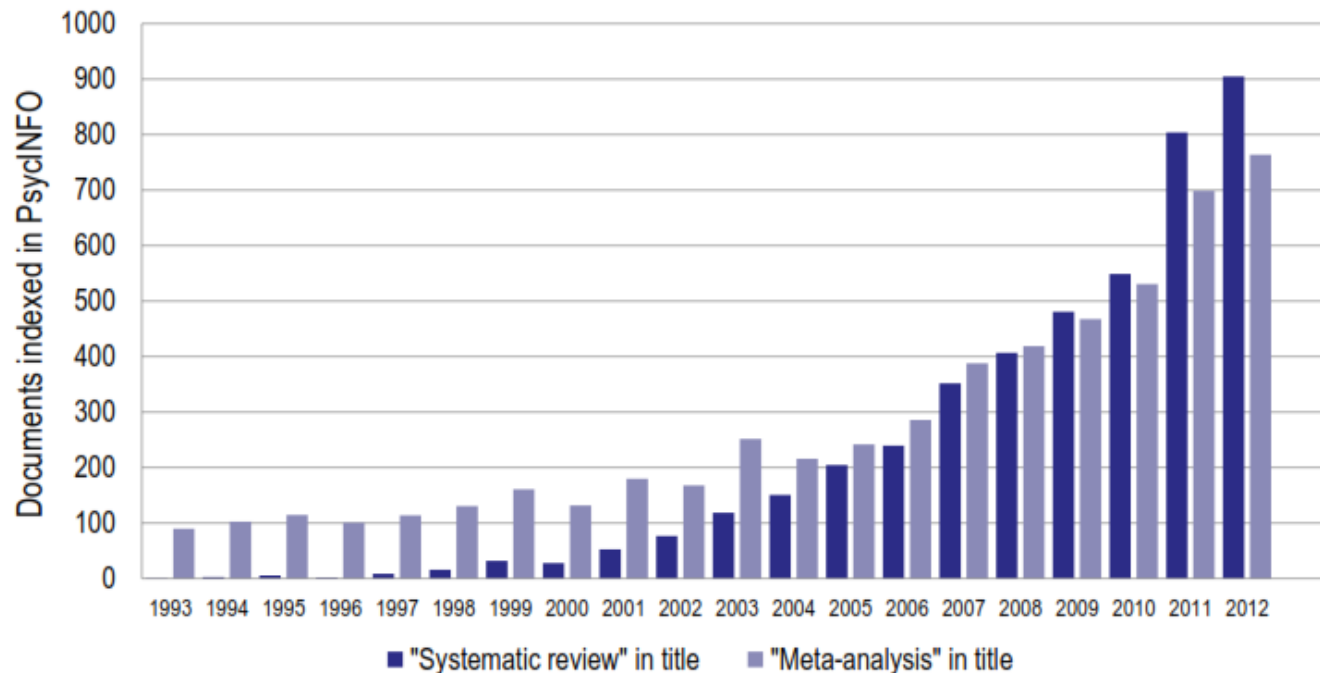
Cochrane Reviews ▾

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Using systematic reviews

Conduct of
research

Avoiding waste in medical **research**
Lancet 2014

Use of
research to
inform
decision
making

Evidence informed **policy** and **practice**

Accredited short course

Liverpool School Tropical Medicine

Stellenbosch University



Offered by Effective Health Care Research Consortium

- Cochrane Infectious Diseases Group
 - Cochrane South Africa
- Centre for Evidence based Health Care



AIM OF THIS COURSE

- To help participants understand, appraise and use systematic reviews, with a focus on reviews of effects.



Objectives of course

By the end of the course participants will be able to

- Outline the rationale for research synthesis
- Identify components of a high quality Cochrane Review
- Access Cochrane Reviews after formulating clear questions using PICO
- Critically appraise reviews of effects, including statistical interpretation of meta-analysis
- Be able to interpret a GRADE profile
- Outline key components that need to be considered in applying to health policy and practice



Tanzania



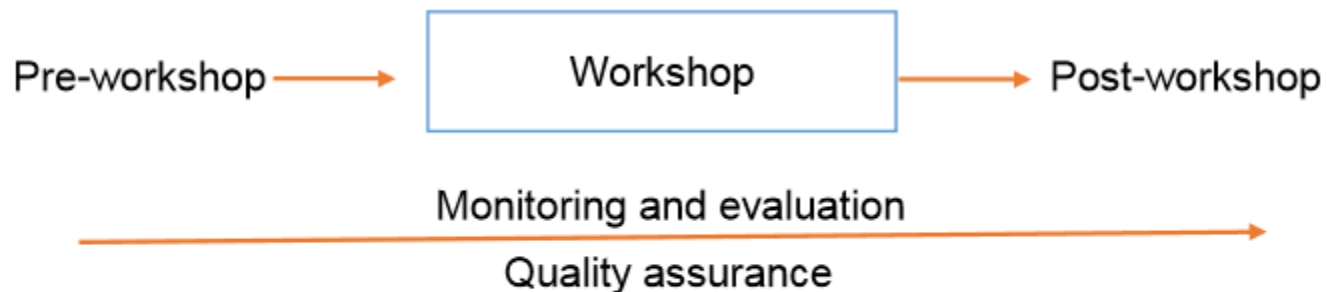
Namibia



Malawi

PROGRAMME OVERVIEW

Before course	Pre reading
Day 1	RCTs Introduction to rationale for systematic reviews
Day 2	Systematic reviews: structure and read reviews Searching for systematic reviews
Day 3	Meta-analysis: What it is and interpreting results GRADE
Day 4	Evidence into policy and practice The Cochrane Collaboration
Post course	Reflection

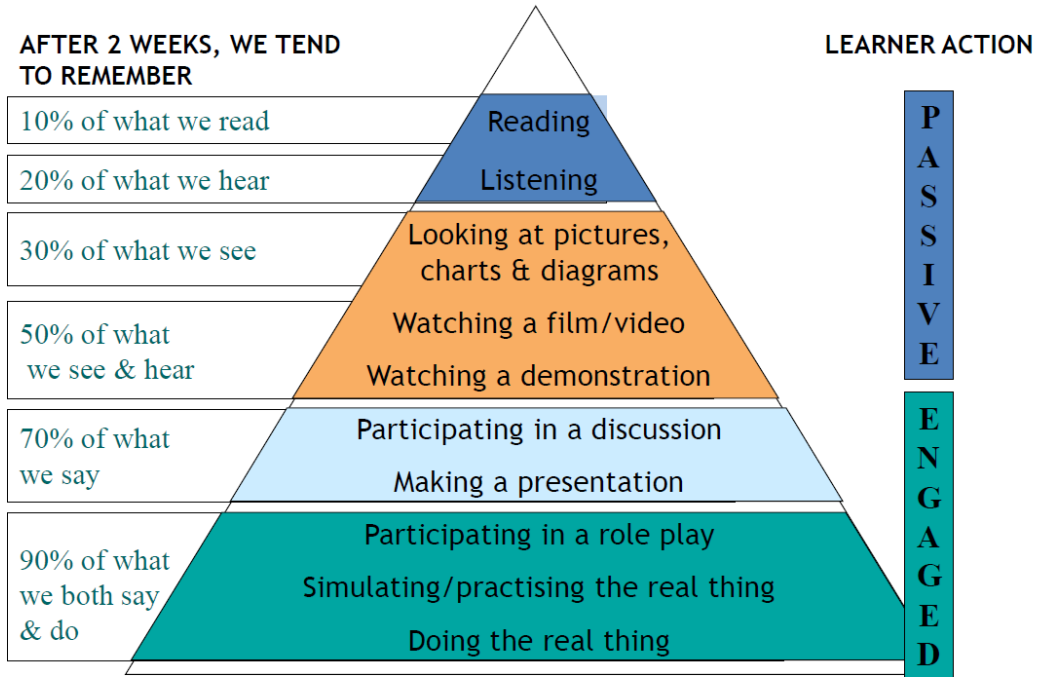


1. Prior to workshop	2. Workshop	3. Post workshop
Recruit participants	Use combination of interactive sessions and presentations	Online resources
Logistics	Encourage learning by doing	Feedback / discussion online
Pre-reading	Use techniques appropriate to expected outcomes	
Facilitator preparation		
4. Quality assurance		
Facilitator meetings before and after each day of workshop On-going reflection and refinement of material and content		
5. Monitoring and evaluation		
Evaluation of workshop		

Learning is an active process



Dale's Cone of Experience



“learners are not empty vessels in which knowledge can be passively unloaded ...” (Heidigger, 1967)


Teaching approach

- Seminar and group work
- Focus on systematic reviews relevant to country
- Learning by doing
- Reflection
- Feedback



Example of teaching tool

LSTM-Stellenbosch Course
Appraisal of a trial
DAFI the duck



1. **Description**

- Objective (look at title)
- Methods (include whether cluster or individually randomised)
- Participants
- Interventions (list by arms)
- Outcomes measured (main)¹
- Other outcomes

2. **Risk of bias appraisal**

- Sequence generation
- Allocation concealment
- Blinding
- Incomplete outcome data
- Selective reporting
- Other bias

3. **Findings**

- Summarise the results
- Consider the statistical significance
- Consider in the light of the risk of bias appraisal

4. **Interpretation²**

- What do the main findings mean?
- Can the results be generalised?
- How does this compare with previous reports?
- What implications for research?
- What implications for practice?

- **Description**
- **Appraisal**
- **Findings**
- **Interpretation**

An online learning management site contains all the material of the course, allows for engagement with participants before, during and after the course.

The image displays a screenshot of an online learning management system (LMS) interface. The interface is divided into several sections:

- Top Navigation Bar:** Features a search bar with the text "Search posts, groups, users, apps and more...", a notification bell with a red "2", and a user profile icon.
- Left Sidebar:** Contains the group name "Primer syst reviews Malawi Group", a "Group Code" field, a "Join URL" field, a "LOCKED" status indicator, and navigation options for "Posts", "Folders", and "Members" (34 joined). Below this is a "Small Groups" section with a "Create a Small Group" button.
- Main Content Area:** Titled "Folders", it lists four folders:
 - Day 1: RCT and Intro to systematic reviews (Dr. Young)
 - Day 2: Finding and reviews (Dr. Young)
 - Day 3: Meta-analysis (Dr. Young)
 - Day 4: Evidence int (Dr. Young)
- Right Panel:** Shows a "Create a Small Group" button and a list of "Other Groups" including:
 - Teaching EBP in a clinical context
 - Systematic reviews and meta-analysis
 - Evidence informed dentistry 2014
 - Policy BUDDIES
 - Evidence based dentistry
 - Evidence based nursing
 - Evidence-informed Health Care
- Post Feed:** Displays two posts:
 - A post by Ms. Schoonees to "Primer in systematic reviews" dated Oct 5, 2012, containing a link to a TED talk about publication bias.
 - A post by Omar L. to "Primer in systematic reviews" dated Sep 28, 2012, mentioning a research concept and a DOC file named "rq_antihelminthics_in_pregnancy.doc".

What do the participants say about the course?

Liked interactive sessions. Real situation examples.

The approach of training is Super “no sleeping in class”

It’s a very good practical workshop

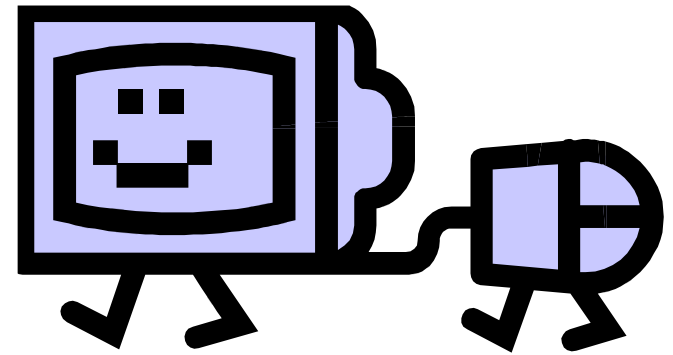
Excellently prepared, practical, supplemented by documents and reading and website

An eye opener in the field of research and systematic reviews

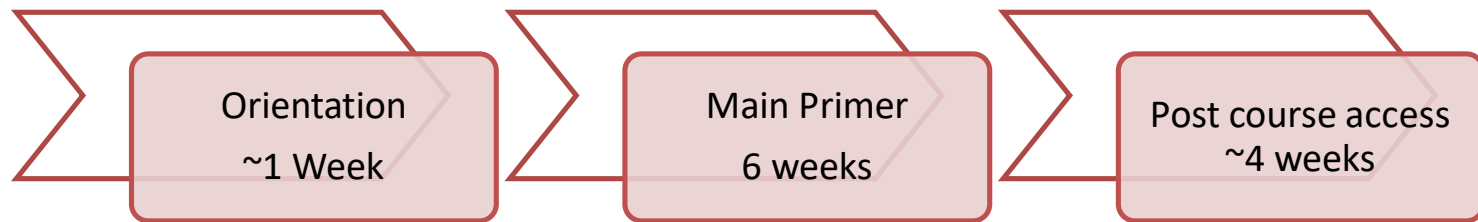
Participants enjoyed the participatory nature, use of relevant examples, blended teaching approach and teaching style, and called for expansion and roll out of the workshop to reach a wider audience.

Online course

- Increasing demand
- Set-up with interaction
- Piloted
- Now being offered



Online Primer in Systematic Reviews



Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
EBP + Phrasing questions	RCTs + ROB	Finding, reading and appraisal of SRs	Interpreting SR results	GRADE + SoF Tables	Knowledge Translation

Feedback

*“Pushed me into new boundaries
and new things that I was very
happy to learn” (2017)*



54 Primer participants to date

In conclusion

Avoiding waste in medical research

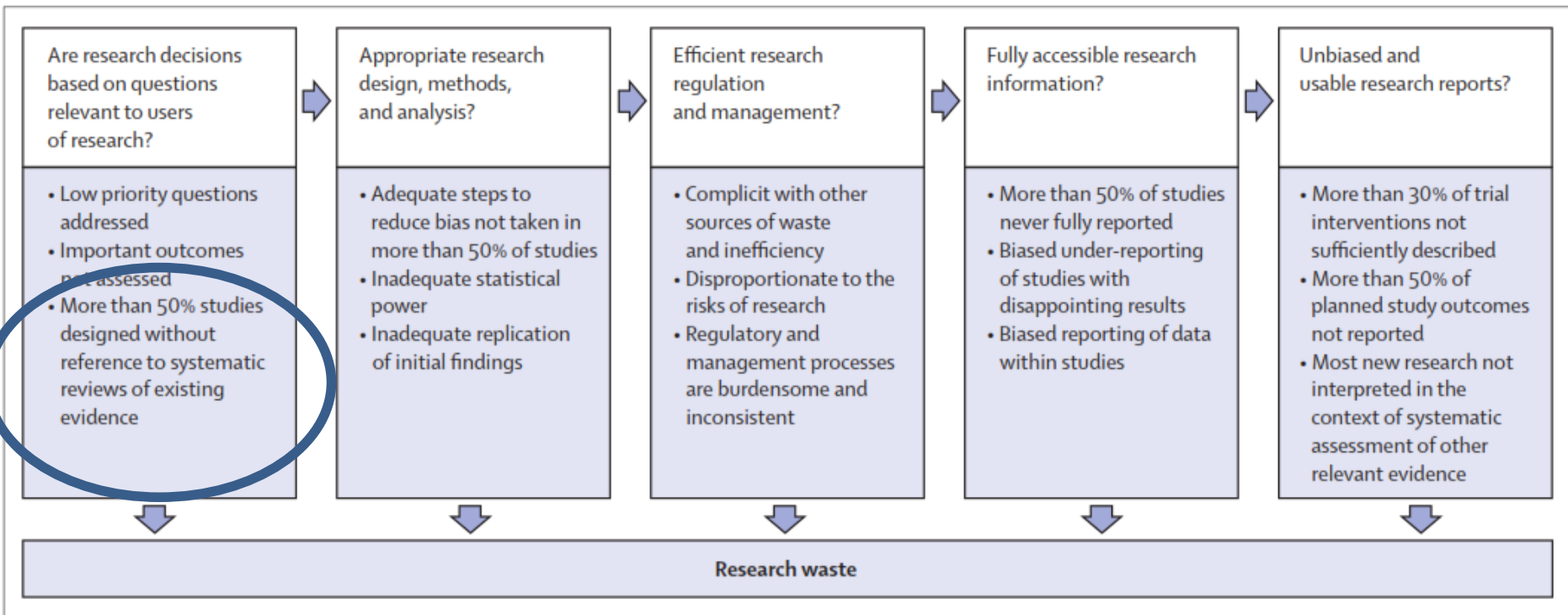
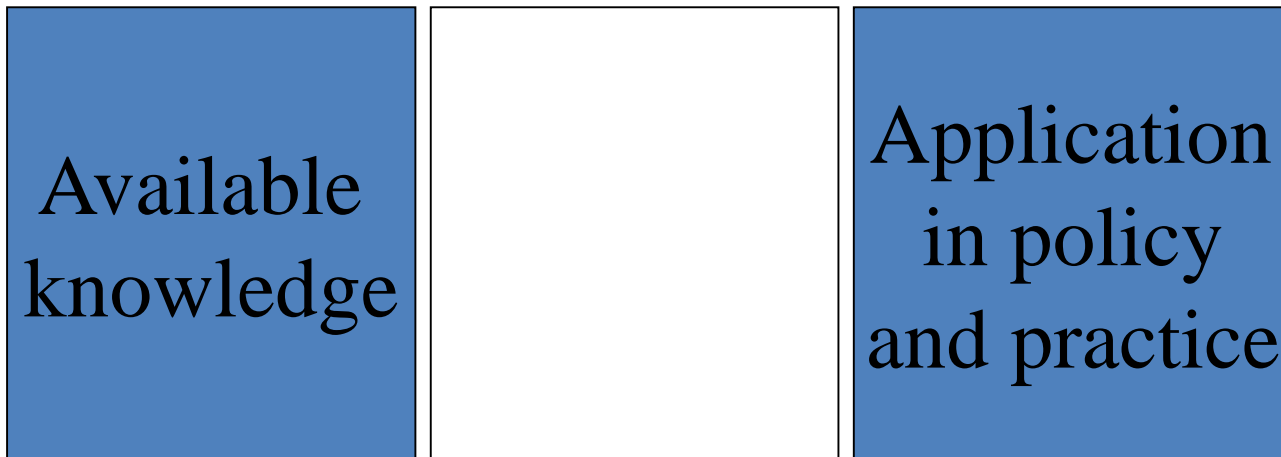


Figure: Avoidable waste or inefficiency in biomedical research

'Know-do gap'

- Gap between what is known and what is done in practice.



- Increasing *understanding and use* systematic reviews is essential in
 - promoting evidence-informed practices
 - identifying relevant new research questions

We will serve the public more responsibly and ethically when research designed to reduce the likelihood that we will be misled by bias and the play of chance has become an expected element of professional and policy making practice, not an optional add-on.

Iain Chalmers

Acknowledgements

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- GESI

Effective Health Care Research Consortium
www.evidence4health.org, funded by UKaid from the UK
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● Centre for
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● Based
● Health
● Care

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*Promoting and supporting evidence-informed
health care*