Cochrane

Trusted evidence.
Informed decisions.
Better health.

**By Atefeh Davoudian**

**Zanjan University of Medical Sciences**

**Mehr 1401**

# About Cochrane

- Cochrane is a global independent network of over 36,000 researchers, professionals, patients, carers and people interested in health.
- We respond to the challenge of making the vast amounts of best available evidence generated through research useful for informing decisions about health.
- Cochrane is a not-for-profit organization with collaborators from more than 120 countries working together to produce credible, accessible health information that is free from commercial sponsorship and other conflicts of interest.

# Cochrane Library

- The Cochrane Library is a collection of six databases that contain different types of high quality, independent evidence to inform healthcare decision-making, and a seventh database that provides information about Cochrane groups.
- Systematic reviews are our main publication. They are published electronically in full text in the Cochrane Library. The abstracts and plain language summaries of all Cochrane Reviews are also freely available on cochrane.org
- All Cochrane Reviews are published in the *Cochrane Database of Systematic Reviews* in the Cochrane Library – cochranelibrary.com

Cochrane Library

# What is a systematic review?

- A systematic review attempts to identify, appraise and synthesize all the empirical evidence that meets pre-specified eligibility criteria to answer a given research question. Researchers conducting systematic reviews use explicit methods aimed at minimizing bias, in order to produce more reliable findings that can be used to inform decision making.

# What is a Cochrane Review?

- Cochrane Reviews are systematic reviews of research in healthcare and health policy that are published in the *Cochrane Database of Systematic Reviews*. There are five types of Cochrane Review:

1. **Intervention reviews** assess the benefits and harms of interventions used in healthcare and health policy.
2. **Diagnostic test accuracy reviews** assess how well a diagnostic test performs in diagnosing and detecting a particular disease.
3. **Methodology reviews** address issues relevant to how systematic reviews and clinical trials are conducted and reported.

# What is a Cochrane Review? (continue)

4. **Qualitative reviews** synthesize qualitative evidence to address questions on aspects other than effectiveness.
5. **Prognosis reviews** address the probable course or future outcome(s) of people with a health problem.

- Cochrane Reviews base their findings on the results of studies that meet certain quality criteria, since the most reliable studies will provide the best evidence for making decisions about health care.

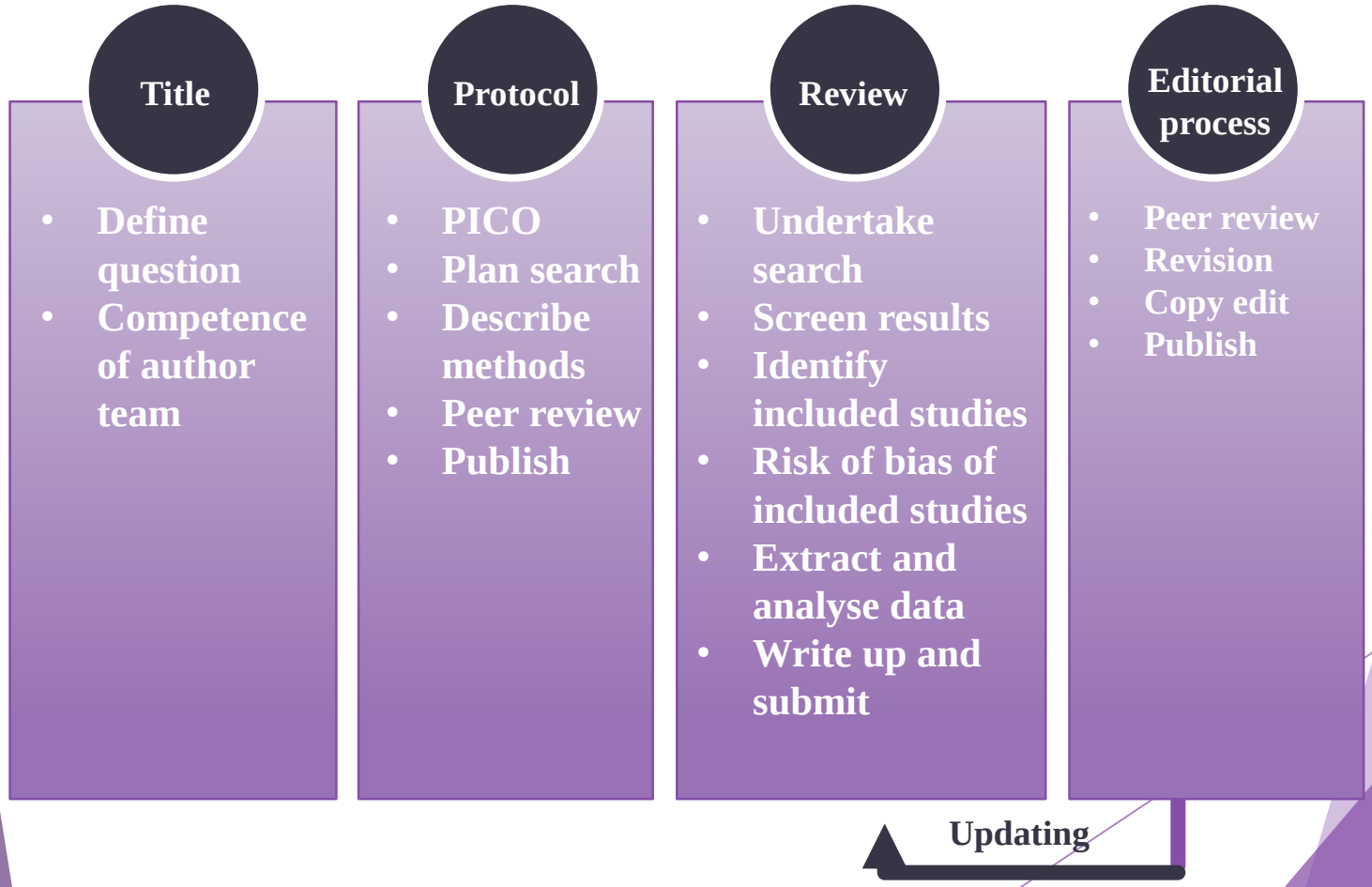
# Cochrane Reviews

- Introduction
- How titles are selected
- The editorial process
- Key components
- Quality assurance / methodological expectations
- Updating

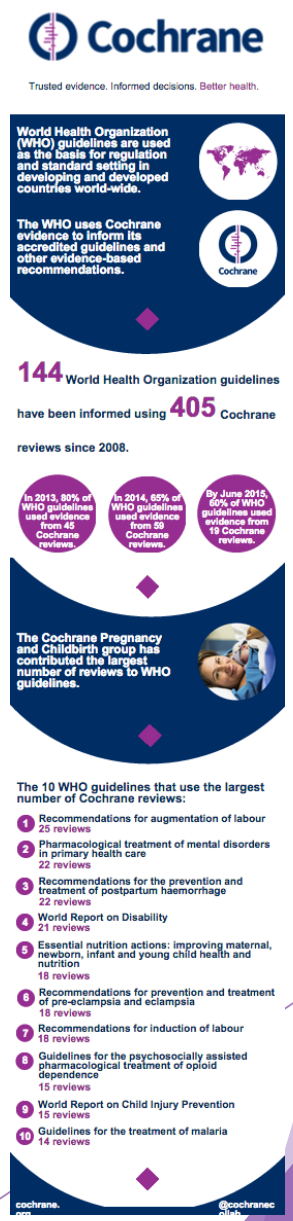
# Cochrane Reviews

- Intervention reviews (clinical and non-clinical)
- Diagnostic Test Accuracy
- Overviews of reviews
- Qualitative reviews
- Prognosis Reviews

# The Cochrane process



# World Health Organization guidelines infographic

# Cochrane Library Cool Tools

In addition to their databases, the Cochrane Library offers:

- Clinical Answers, meant to provide easily digestible, clinically-focused entry points to rigorous research from Cochrane Reviews, to assist in point-of-care evidence-based decision making. Note the topic and recency filters on the left side of the page.
- Special Collections, highlighting Cochrane Reviews and blog posts on trending topics.

# Cochrane Library Cool Tools

- The Cochrane Colloquium offers some free trainings on evidence-based methodologies, as well as free access to two publications outlining systematic review methodological expectations.
  - Higgins JPT, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, Welch VA (editors). Cochrane Handbook for Systematic Reviews of Interventions version 6.0 (updated July 2019). Cochrane, 2019. Available online at www.training.cochrane.org/handbook.
  - Higgins JPT, Lasserson T, Chandler J, Tovey D, Thomas J, Flemyng E, Churchill R. Methodological Expectations of Cochrane Intervention Reviews. Cochrane: London, Version October 2019. Available online at https://community.cochrane.org/mecir-manual.

# How to Use Medical Subject Headings in the Cochrane Library

## Controlled Vocabulary: MeSH

- The Cochrane Library relies on Medical Subject Headings (MeSH) from the National Library of Medicine, composed of a controlled vocabulary of biomedical terms used to describe the subjects of a journal article. To access the hierarchical listing of terms, click on the “Medical Terms (MeSH)” tab or use the MeSH icon in the Search Manager.

## Controlled Vocabulary: MeSH (continue)

- After typing in a term in the MeSH search box, matches to the MeSH thesaurus will be displayed along with structured trees that show the hierarchical relationships among related terms. A summary of search results from different Cochrane databases will also be displayed.
- Once you have selected you MeSH tree options, you can run it as a search by clicking the “Add to Search Manager” link. It will then be present in the “Search Manager” tab (second from the left).

# Mesh Hierarchy and Subheadings

- MeSH trees displayed in Cochrane allow you to visualize where your MeSH term sits in the hierarchy of terms and shows any branches off of your term. Selecting “Explode all trees,” allows you to search for your term and any terms that branch from it. Selecting “Single MeSH term (unexploded),” allows you to just search for your MeSH term without branches. If your MeSH term is part of multiple trees, you can select the specific trees you want to search by selecting “Explode selected trees.”
- A second search box gives you the option to "Select subheadings / qualifiers." Any MeSH can be made more specific by the addition of subheadings. These appear as a drop down menu similar to what’s described above for the “Enter MeSH term” box.

Cochrane Library

# Using Keywords

- Keywords can be any words used to describe your idea or concept.
- Keywords can be single words or phrases.
- Use quotes around all phrases to ensure that the phrase is searched together.
- For more ideas, visit the MeSH database through PubMed and look at the entry terms listed in the MeSH record.
- Also consider using synonyms, acroynyms, initialisms, variations in spelling, and other closely-related terms used interchangeably to describe the topic.

# Keyword Generation

Keywords can be generated by:

- browsing entry terms in PubMed's MeSH, and synonyms in Embase's Emtree to add additional keywords to a concept;
- looking at a few key articles and seeing how the terminology is used; and by
- doing a few preliminary searches and browsing the results to see how the terminology is used.

# Search Field Tags

- :ti - Searches the Title field
- :ab - Searches the Abstract field
- :kw - Searches the Keyword field
- :au - Searches the Author field
- :so - Searches the Source field
- :pt - Searches the Publication Type field
- :tb - Searches the Tables field

# Proximity Searching in Cochrane

- Proximity search using NEAR: Use NEAR/ with a number to indicate proximity of terms either before or after each other. For example, “antidepressant NEAR/10 narcolepsy” looks for the word antidepressant within 10 words of narcolepsy. The default proximity value for the operator when no number is entered is 6.
- Proximity search using NEXT: Use NEXT to match terms that appear next to each other. E.g. cholera NEXT treat* would return “cholera treatment”

# Truncation

- In the Cochrane Library you can use a * at the root of a word to find multiple endings. For example:
  - arthroplast* will return arthroplasty, arthroplasties, arthroplastic, arthroplastics, etc.
  - mobili* will return mobility, mobilization, mobilisation, mobilize, etc.
- You can also use a ? as a wildcard to search for letter variants within a word (e.g. wom?n finds women and woman)

# Combining Search Terms and Concepts

- A comprehensive and systematic search of the Cochrane Library includes both controlled vocabulary (MeSH) and keyword terms.
- **Boolean operators** are used to combine search terms. In the Cochrane Library, you can use the operators AND, OR, and NOT.
- Boolean operators MUST be used as upper case (AND, OR, NOT).
  - **OR**—use OR between similar keywords, like synonyms, acronyms, and variations in spelling within the same idea or concept
  - **AND**—use AND to link ideas and concepts where you want to see both ideas or concepts in your search results

# Combining Search Terms and Concepts (continue)

- **NOT**—used to exclude specific keywords from the search, however, you will want to use NOT with caution because you may end up missing something important.

- Go to the **"Search Manager" page** to combine searches. This is where your search history is located during your search session.
- To save searches and access your search history, sign up for a **Cochrane Library account**.

# Saving Your Searches

- Sign up for a **Cochrane Library account**.
- Once logged in, go to the “Search Manager” tab (the tab directly to the right of the default “Search” tab). Towards the bottom of this page there is a purple drop-down menu labelled “Save this search” with an option to “Save as”
- To create an alert for a saved search strategy, click on the “View saved searches” link. In the window that opens, select the checkbox for “e-mail alert” for the individual search

# Systematic Reviews and Clinical Practice Guidelines Improve Healthcare Decision Making

Click on any text for more information

We need better evidence and guidance to make informed healthcare choices

Define Clinical Problem

Assemble Multidisciplinary Team

DEVELOPMENT OF SYSTEMATIC REVIEWS

Identify, Assess, and Synthesize Evidence

Produce Systematic Review Report

Appraise Systematic Reviews and Other Evidence

Assemble Guideline Development Group

DEVELOPMENT OF CLINICAL PRACTICE GUIDELINES

Incorporate Expert Opinion and Patient Preferences and Characteristics

Produce Clinical Practice Guideline

Use Guidance to Make Better Informed Decisions

Improved health outcomes and quality of care



INSTITUTE OF MEDICINE

# References


- **https://training.cochrane.org/**
- JOHNS HOPKINS University & Medicine