

# How to search for evidence of intervention effectiveness and cost-effectiveness

Note: this tool is relevant to searching for evidence of intervention effectiveness. There are, of course, many other types of research evidence that are useful for answering questions such as: "What is the problem?", "What is the cause of the problem?", "How is the intervention working?" and "How should an intervention be implemented?" These are not addressed by this tool.

## 1. The research question and inclusion criteria

First you need to specify your research question. For each question try to specify the following:

- Population:* May include populations, communities or individuals. May be limited by age, gender or other characteristics, e.g. disadvantage, Aboriginal etc.
- Interventions:* Can be a specific intervention (e.g. immunisation for measles or a workplace healthy eating policy), general (e.g. mass media interventions to prevent smoking), a type of approach (e.g. peer-led strategies for changing behaviour) or based on a particular theory.
- Comparisons:* May be no intervention, another intervention or standard care/practice.
- Outcomes:* Can be a disease (e.g. diabetes), change in behaviour or risk factor (e.g. quantity of physical activity, obesity), quality of life, cost-effectiveness or a combination. Can also include process measures (e.g. reach) and intermediate measures (e.g. attitudes, knowledge).
- Study types:* Systematic reviews (or meta-analyses) of all relevant studies; controlled trials or comparative studies; economic evaluations (including cost-effectiveness, cost-benefit and cost-utility analyses).

This will help you to define your research question and will constitute your inclusion criteria for studies. You may also specify a cut-off or range of publication dates to limit the search.

## 2. Search strategy and sources of studies

How you search and what sources you search will depend on how much time you have and the resources available to you (money, people and skills - such as literature searching and critical appraisal skills). You should also record the date of your search. We recommend that you start first with systematic reviews of all relevant studies. Start with the following sources. Note that most of these links are also available on the Health Promotion Evidence and Evaluation website:

[http://www.health.vic.gov.au/healthpromotion/evidence\\_evaluation/index.htm](http://www.health.vic.gov.au/healthpromotion/evidence_evaluation/index.htm).

## **Systematic reviews**

A systematic review is a review of a clearly formulated question that uses systematic and explicit methods to identify, select and critically appraise relevant research, and to collect and analyse data from the studies that are included in the review. Statistical methods (meta-analysis) may or may not be used to analyse and summarise the results of the included studies. Credible sources include:

- Centre for Reviews and Dissemination databases: particularly the Database of Abstracts of Reviews of Effectiveness (DARE) and the Health Technology Assessment (HTA) Database - both found at: <http://www.crd.york.ac.uk/crdweb/>.

*The nice thing about these databases is that they confirm that the review is actually a systematic review, and give a summary and critical appraisal of the review. They will give you the reference for the review itself (and possibly a web link) but you will need to track down the actual review yourself. The DARE database also includes Cochrane Collaboration systematic reviews.*

- The Cochrane Library: <http://www3.interscience.wiley.com/cgi-bin/mrwhome/106568753/HOME>;

*This is the direct source for Cochrane Collaboration systematic reviews.*

- The Campbell Library: <http://www.campbellcollaboration.org/frontend.aspx>

*The Campbell Collaboration (C2) helps people make well-informed decisions by preparing, maintaining and disseminating systematic reviews in education, crime and justice, and social welfare. The Campbell Collaboration uses similar methods, processes and structures as the Cochrane Collaboration but covers social interventions, while Cochrane focuses on healthcare interventions.*

- Effective Public Health Practice Project: <http://www.ehphp.ca/>

*EPHPP conducts systematic reviews on the effectiveness of public health interventions, and summarises recent, high quality reviews produced by others.*

- Evidence for Policy and Practice Information and Coordinating Centre (EPPI-Centre): <http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=61>

- Health-evidence Canada: <http://health-evidence.ca/articles/search>

- National Institute for Health and Clinical Excellence: <http://www.nice.org.uk/guidance/index.jsp>

*From this page you can search for guidance on particular topics – including public health. To find the reviews underpinning the guidance select the topic, go to the 'Other information' section and select 'Background information'.*

- Guide to Community Preventive Services, Centers for Disease Control and Prevention: <http://www.thecommunityguide.org/index.html>

If sound, relevant material of this type is identified you may choose to stop the search. If none is found the next step is to search for properly designed randomised controlled trials or controlled trials.

### **Controlled trials**

A good source for controlled trials that doesn't require extensive searching and expertise in specifying search strategies is the Cochrane Central Register of Controlled Trials (CENTRAL). Trials included here are taken from bibliographic databases (notably [MEDLINE](#) and [EMBASE](#)), and other published and unpublished sources. It is found at: [http://www.mrw.interscience.wiley.com/cochrane/cochrane\\_clcentral\\_articles\\_fs.html](http://www.mrw.interscience.wiley.com/cochrane/cochrane_clcentral_articles_fs.html).

### **Economic Evaluations**

These include cost-effectiveness, cost-utility (e.g. \$ per Quality-adjusted life year (QALY) or \$ per disability-adjusted life year (DALY)) and cost-benefit. This type of information adds to the effectiveness evidence. But note that if an intervention is not effective it is very unlikely to be cost-effective. Also note that economic evaluations are very context specific because costs vary between countries (due to differences in health care systems) and are also very dependent on the methodology used including the reference year, study perspective (e.g. societal vs health system perspective), discounting rate, time horizon. Thus, results are rarely generalisable to other countries or contexts. Comparing economic evaluations from different countries, different contexts and/or different methods is not advisable.

Try these sources:

- Centre for Reviews and Dissemination database: The NHS Economic Evaluation Database – go to: <http://www.crd.york.ac.uk/crdweb/> and select the NHS EED tab.

*This database will confirm that the study is actually an economic evaluation and not just a study of costs or valuation of outcomes, and gives a summary and critical appraisal of the study. It will give you the reference for the study itself (and possibly a web link) but you will need to track down the actual review yourself.*

- Paediatric Economic Database Evaluation (PEDE): <http://pede.bioinfo.sickkids.on.ca/pede/database.jsp>

*This database only includes economic evaluations. Cost analyses, cost descriptions or cost of illness studies are not included. Only basic information about the study is included. A reference to the original study is included but you will need to track it down yourself.*

### **3. What next?**

If you haven't found what you need it is time to rethink. Systematic searches (and reporting) of the primary research literature (including the grey literature such as government reports) require particular expertise and you should consider seeking expert advice.

### **4. Who else can help?**

The librarians in your institution's library can help with searches.

**For further information contact the:**

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Health Development Unit  
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**Date last updated:** 6 November 2009