

How to ask an answerable question

1. Write down a clinical question you would like answered from the literature:

Unfortunately, it's not as easy as typing this question into the database and getting the answer. Clinical questions are often broad, complex and multilevel, so we need to refine and narrow questions to make them answerable from the literature.

As an example, clinical questions frequently use words like "best" or "quickest" or "most effective". Health practitioners want to know what the best treatment is that will work fastest with the least number of adverse effects. Unfortunately, in general, questions with these types of words are very difficult to answer from the literature.

Why is this?

Think about how you would search a database for "best treatment for asthma". A search for "asthma" in PubMed retrieves 107214 records (as @ January 2009).

What would you search for next? How can you search for "best"? Can you see the difficulty? Instead you have to include some form of treatment in the search to limit the number of records you retrieve.

We use a framework called "PICO" to make the process of asking an answerable question easier (but it is still tricky and takes practice).

Asking the Right Question (PICO)

<p>P – Patient Type</p> <p>Exactly who are you interested in finding information about? Be precise (patients or populations of specific ages, gender, diseases, conditions)</p>	<p>Your Question:</p>	<p>Primary Search Terms:</p>	<p>Synonym 1:</p>
			<p>Synonym 2:</p>
<p>I – Intervention</p> <p>Describe the main intervention. What is happening to these patients? (Exposures, prognostic factors, treatments, diagnostic tests)</p>			<p>Synonym 1:</p>
			<p>Synonym 2:</p>
<p>C – Comparison (if appropriate)</p> <p>Describe the main alternative being considered. (gold standard, control, no treatment)</p>			<p>Synonym 1:</p>
			<p>Synonym 2:</p>
<p>O – Outcome</p> <p>Describe what you’re trying to measure (mortality, timely diagnosis, accuracy, symptom improvement)</p>			<p>Synonym 1:</p>
			<p>Synonym 2:</p>
<p>Your Revised, “Right” Question:</p>			

Type of Question	Ideal Type of Study
<input type="checkbox"/> Therapy	RCT
<input type="checkbox"/> Prevention	RCT > Cohort Study > Case Control
<input type="checkbox"/> Diagnosis	Prospective, blind controlled trial comparison to gold standard
<input type="checkbox"/> Prognosis	Cohort Study > Case Control > Case Series/Case Report

TIPS

Source: Evidence-Based Answers to Clinical Questions for Busy Clinicians. (2009) The Centre for Clinical Effectiveness, Southern Health, Melbourne, Australia.

http://www.southernhealth.org.au/icms_docs/2145_EBP_workbook.pdf

Searching tools

To combine search terms we can use the **Boolean operators** "AND" and "OR". These terms affect the way that the database retrieves records.

OR will broaden your search by returning any records that contain either one of your terms e.g. cancer OR neoplasm.

AND will restrict your search by only returning records that contain both terms e.g. stroke AND aspirin.

Truncation: In The Cochrane Library and PubMed you can use an asterisk * to truncate search terms, eg the search term "arter*" will retrieve artery, arteries, arterial, etc. In other databases you use different symbols (\$ in Ovid, etc)

Where do I go to search? I suggest that you use The Cochrane Library and PubMed Clinical Queries as your first search options. These two resources provide high quality information quickly, and they have done some of the work of filtering and appraising for you.

What is The Cochrane Library?

The Cochrane Library is a regularly updated collection of evidence-based practice databases that provide high quality information about health-care **interventions**

What is PubMed?

PubMed is an online, freely accessible version of the Medline database, which is also available through Ovid.

PubMed Clinical Queries is a specialized search engine intended for clinicians that has built-in search "filters" designed to find high quality studies. It includes searches designed for four study categories: **therapy, diagnosis, etiology and prognosis.**