



Searching Healthcare Databases: a quick guide

Healthcare databases are bibliographic databases of journal articles including the title, author, citation and abstract.



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Step 1: Think about your question

When undertaking a literature search it is very important to think about your question before you begin. You need to know what you are looking for. Try not to be vague. Break down your question into its constituent parts. The PICO formula may help you with this process:

P - Patient/Population/Problem

Who is being treated? What illness/condition do they have? Are they male or female/adults or children?

I - Intervention

What treatment or intervention are you considering?

C - Comparison

Are there any alternative treatments that you want to consider?

O - Outcomes

What can be measured to see if the intervention works? What symptoms might be affected?

Example question:

In patients with cuts, is washing with water or saline better at reducing infection?

Split this question into the PICO sections. It is also important to think of alternative terms for each of your topics. In our example, *cuts* could also be described as *lacerations*, *water* could be described as *H₂O*, *saline* could be described as *salt water* and *infection* could be described as *sepsis*. Write down all the alternates that you can think of as shown below.

P	Cuts	OR	lacerations
I	Water	OR	H ₂ O
C	Saline	OR	salt water
O	Infection	OR	sepsis

<p>TIP: Remember to include both British and American spellings in your list</p>

⇒ It is not essential that you have 4 parts to your question as we have shown in this example. Two is an absolute minimum, but the more parts you do have to your question, the more focused your final results will be.

Step 2: Choose a database to search

There are 8 databases that you can choose from. Each one has a different focus, so choose the database that matches your question type. You may need to search more than one database to locate all the relevant articles. The databases can be accessed via the Trust intranet or internet pages or at www.evidence.nhs.uk (select 'Journals and Databases' then 'Healthcare Databases Advanced Search'.) To choose a database, click on the title.

AMED 1985 - present

Covers occupational therapy, physiotherapy, rehabilitation, plus alternative medicine.

BNI 1985 - present

This database indexes articles from the most popular English language nursing journals published primarily in the UK.

Cinahl 1982 - present

A database focusing on all aspects of nursing and allied health.



Embase 1974 - present

This database provides current and comprehensive information on drugs, pharmacology and general medicine.

Health Business Elite

Provides journal content on all aspects of health care administration and health care institution management.

HMIC

Comprises the DH Data and Kings Fund databases, both of which cover NHS health services management, policy and standards.

Medline 1950 - present

Covers all aspects of medicine, dentistry, psychology, and advanced nursing

PsycInfo 1806 – present

Covers the clinical, social and biological areas of psychology.

Please note: An Athens password is needed to access the databases listed above. If you do not have an Athens password, please contact the library or apply online via the library intranet site.

Step 3: Enter your search terms/free text searching

⇒ For this search example, the Cinahl database has been used. (The other databases look and work in the same way.)

Enter the search terms from your PICO formula one step at a time. Begin with the first concept (in our example: *cuts*). Type your search term into the box provided. Do not put in full sentences. Choose the keywords from your PICO strategy only. You can choose where you would like to search from the drop down list, but in this example we will be using *Any field*.

Also enter the alternate terms that you have written down. Use the OR command between the alternate terms/synonyms and American/British spellings. This will allow both terms to be included in your results. In the example below we have chosen to search for any articles containing the word *cuts* OR the word *lacerations*. When you have entered all your terms click the *search* button.

The screenshot shows a search interface with a blue header bar that reads "Search keyword (with or without thesaurus mapping)". Below the header, there is a text input field containing "cuts OR lacerations". To the right of the input field is a dropdown menu currently set to "Title and Abstract", with "Any field" selected. A "SEARCH" button is located to the right of the dropdown menu.

Your results will be displayed as shown below. The database will build up a search history as you go along. The number of articles that have been retrieved can be seen in the hits column. In this example, 18264 articles have been found. Do not worry at this stage that this is a large number. The search will be refined later.

The screenshot shows a "Search History" table with the following data:

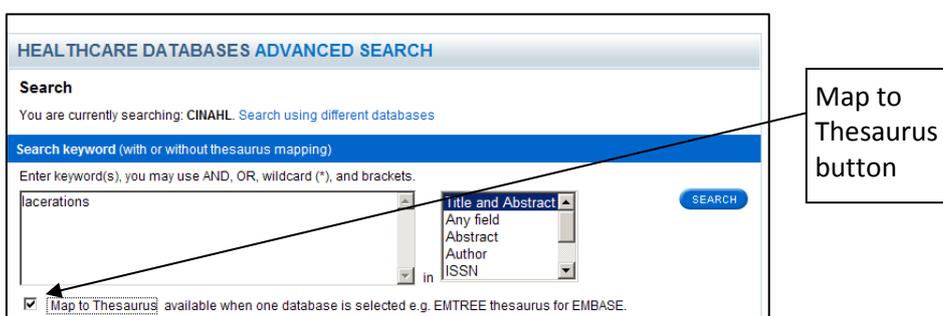
No.	<input type="checkbox"/>	Database	Search term	Hits
1	<input type="checkbox"/>	CINAHL	(cuts OR lacerations).af	18264

Below the table, there are buttons for "SAVE SELECTED ROWS", "SAVE ALL", "COMBINE SELECTED SEARCHES", "DELETE SELECTED SEARCHES", and "REMOVE DUPLICATES". The "Combine with:" section shows "AND" selected over "OR".

TIP: When entering search terms, wildcards can also be used to improve your results. For example, if you enter the term *pregnan** (with the * symbol at the end) it will return all variations, including *pregnant*, *pregnancy* and *pregnancies*.

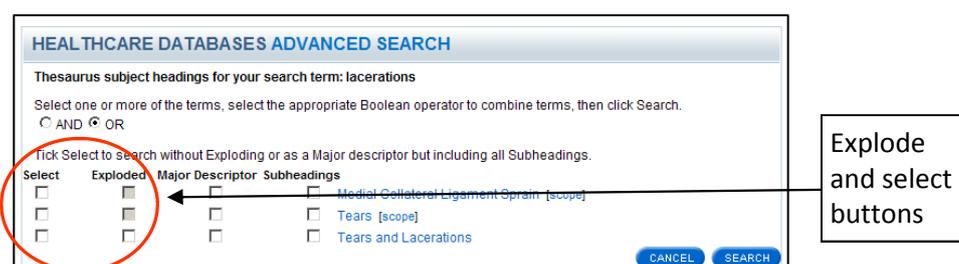
Step 4: Use the database indexing/thesaurus/MESH

This tool is used in addition to the free text searching used so far. It allows you to match your search terms to the indexed vocabulary of the database and will improve your results. To use thesaurus mapping, enter your search term as before, but this time click the *Map to Thesaurus* button below the search box. Then click the *search* button. In our example, we will write lacerations in the box (because this is the medical term for cuts), click *Map to Thesaurus* and then click *search*.



A new screen will appear as shown below. It will list one or more options for your search term.

Select an appropriate option from those provided and click the *explode* box on the same line. An exploded search will use your subject heading and any narrower search terms. If this button is not available, choose the *select* button instead.



If you are unsure which term best suits your topic, scope notes are often available to provide further information about each subject heading. Click on the word *scope* for more details. In our example, we will click the *explode* button next to *tears and lacerations* and then click *search*.

Step 5: Combining parts of your search

The next step is to combine the parts of your search completed so far. This will group together all the articles found so far relating to cuts and will also remove any duplicates.

To do this, click on the boxes next to numbers 1 and 2, click on the OR radio button and then click *combine selected searches*. A new line will be added to your search history as shown below.

HEALTHCARE DATABASES ADVANCED SEARCH

Search History

SAVE SELECTED ROWS SAVE ALL

No.	<input type="checkbox"/>	Database	Search term	Hits
1	<input type="checkbox"/>	CINAHL	(cuts OR lacerations).af	18264
2	<input type="checkbox"/>	CINAHL	exp TEARS AND LACERATIONS/	1542
3	<input type="checkbox"/>	CINAHL	1 OR 2	18290

Combine with: AND OR COMBINE SELECTED SEARCHES DELETE SELECTED SEARCHES REMOVE DUPLICATES

Boxes OR radio button Combine selected searches button

Step 6: Completing the search

From this point, you simply repeat steps 3 to 5 for each of the other topics in your search question (in our example: *water*, *saline* and *infection*). For each topic, remember to do free text searching and searching using the thesaurus. Also remember to combine the two when you have completed each stage.

To finish the search, you need to combine the different parts of your search together so that you retrieve only articles containing all four topics (*cuts AND water AND saline AND infection*.) This can be done by ticking the boxes next to the results from each stage, clicking the AND radio button and then clicking *combine selected searches*.

Combine with: AND OR COMBINE SELECTED SEARCHES

A copy of the full search strategy with the final result is shown overleaf.

Search History

Show Last 10 SAVE SELECTED ROWS SAVE ALL

No.	<input type="checkbox"/>	Database	Search term	Hits
1	<input type="checkbox"/>	CINAHL	(cuts OR lacerations).af	18264
2	<input type="checkbox"/>	CINAHL	exp TEARS AND LACERATIONS/	1542
3	<input type="checkbox"/>	CINAHL	1 OR 2	18290
4	<input type="checkbox"/>	CINAHL	(water OR h2o).af	59347
5	<input type="checkbox"/>	CINAHL	exp WATER/	2897
6	<input type="checkbox"/>	CINAHL	4 OR 5	59448
7	<input type="checkbox"/>	CINAHL	(saline OR "salt water").af	14750
8	<input type="checkbox"/>	CINAHL	NORMAL SALINE/ OR SALINE SOLUTION, HYPERTONIC/	1190
9	<input type="checkbox"/>	CINAHL	7 OR 8	14750
10	<input type="checkbox"/>	CINAHL	(infection OR sepsis).af	135505
11	<input type="checkbox"/>	CINAHL	exp INFECTION/	52355
12	<input type="checkbox"/>	CINAHL	10 OR 11	151578
13	<input type="checkbox"/>	CINAHL	3 AND 6 AND 9 AND 12	158

Step 7: Limiting your search

Use the limits section at the bottom of the page to narrow your search results further. Open the limits in full by clicking on the arrows on the right. Limits available include:

- ◆ Date
- ◆ Language
- ◆ Age groups
- ◆ Publication types

To add limits to your final search result, put the number of the final line in the search box (this would be 13 shown above), add your limits and then click *search*.

Date limits ⏪

From Publication Year to Publication Year

Article, Journal and Publication Type limits ⏪

Gender limits ⏪

Age Groups limits ⏪

Language limits ⏪

Other limits ⏪

SEARCH

Open using the arrows

TIP: Do not add too many limits to your search straight away. Add basic limits and then only add more if necessary.

Step 8: Viewing results

To view your results, click on the number of results in the hits column. The results can then be sorted by publication date, title or author. You can also choose to view the abstracts and change the number of results listed on each page.

The screenshot shows a search results interface. On the left is a table with a 'Hits' column containing the numbers 1190, 14750, 135505, 52355, 151578, and 158. The number 158 is circled in red. To the right is a control bar with a checkbox for 'Show Abstracts', a dropdown menu set to 'Unsorted', a 'SORT' button, and a dropdown for 'Items per page' set to 10. Below the control bar is a detailed view of a search result:

4. A multicenter comparison of tap water versus sterile saline for wound irrigation.
 Author(s): Moscatti RM, Mayrose J, Reardon RF, Janicke DM, Jehle DV
 Citation: Academic Emergency Medicine, 01 May 2007, vol./iss. 14/5(404-409), 10696563
 Publication Date: 01 May 2007
 Source: CINAHL
 Full Text:
 Available in fulltext at [Wiley](#)

Step 9: Viewing full text articles

If an article is available to you in full text, there will be a link below the citation similar to the example below.

Full Text:
 Available in fulltext at [BioMedCentral](#)
 Available in fulltext at [National Library of Medicine](#)

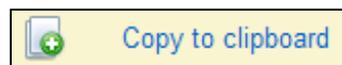
Click on the link. You may be asked for your Athens password immediately. If not, search for the Athens link.

If you see the following link, this means that the full text article should be available in print at the named hospital site. Contact the library listed for more information.

Full Text:
 Available in print at [Royal Preston Hospital Library](#)

Step 10: Saving, printing and emailing results

To save results from your search you first need to go through all the articles and select the ones of interest by clicking the box by each article number. If there are a large number of articles to check you can copy them to your *clipboard* by clicking the link shown below as you go along. This will act as a temporary holding area for the studies you have chosen. When you have selected all the results that you would like to save, you have the choice of emailing or exporting (saving) them. The output options are located at the bottom of the page as shown overleaf.



You can choose to output the results in various formats (PDF is recommended). You can also choose a short, medium or full

Results Selected	Output Format	Display Format	Actions
No results selected. Select all on this page Select 1 - 200 Select 201 - 400 Select 401 - 800 Select 801 - 800 Select 801 - 1000	Choose output document format. <input checked="" type="radio"/> HTML <input type="radio"/> PDF <input type="radio"/> MS Word <input type="radio"/> Text <input type="radio"/> XML <input type="radio"/> RIS (inc RefMan, ProCite, EndNote and RefWorks)	Choose output fields. <input checked="" type="radio"/> Short ⓘ <input type="radio"/> Medium ⓘ <input type="radio"/> Full ⓘ <input type="checkbox"/> Include Search History	Display, save or email results with selected fields and output formats. <input type="button" value="Export Results"/> <input type="button" value="Email Results"/>

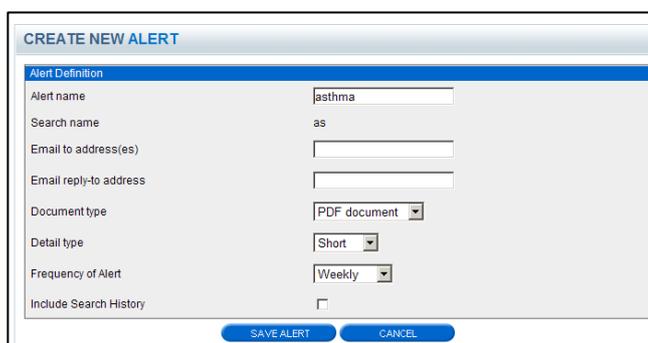
format (medium is recommended). It is useful to opt to include your search history. Then click on *export results* or *email results*. If you click on *export results*, you can save the articles to a folder of your choice. If you choose *email results*, you will be asked for an email address and the results will be sent to you.

Step 11: Creating alerts

You can choose to receive regular updates from your search when new results are available. To do this, click the *save all* button above the search history, then enter a name for your search. Then select *save & create alert*.



SAVE CURRENT SEARCH	
Search Name: <input type="text"/>	<input type="button" value="SAVE"/> <input type="button" value="SAVE & CREATE ALERT"/> <input type="button" value="CANCEL"/>
Your Current Search History	
asthma.ti.ab	CINAHL



CREATE NEW ALERT	
Alert Definition	
Alert name	<input type="text" value="asthma"/>
Search name	<input type="text" value="as"/>
Email to address(es)	<input type="text"/>
Email reply-to address	<input type="text"/>
Document type	<input type="text" value="PDF document"/>
Detail type	<input type="text" value="Short"/>
Frequency of Alert	<input type="text" value="Weekly"/>
Include Search History	<input type="checkbox"/>
<input type="button" value="SAVE ALERT"/> <input type="button" value="CANCEL"/>	

On the final screen, you will need to enter an email address. This is where the alerts will be delivered. You can also choose the format for the alerts and how often you would like to receive them. Finally, click *save alert*.

Where to get help

If you are struggling with your literature search, or need any help and advice, the Trust has a specialist service that can help.

Clinical Librarian Service

Literature Searching

The Trust's Library and Information Service operates a Clinical Librarian Service where information specialists are able to undertake literature searches for staff members. This can be for any reason, including patient care, research, education, service development and for the production of Trust documents. Expert staff will search the major medical databases (e.g. Medline, Cinahl, Embase), plus a wide range of other evidence-based resources. This service is free to all members of Trust staff.

A literature search request form is available via the Trust intranet and internet pages. Searches can also be requested by contacting the Clinical Librarian on 01772 52(4763), by emailing Joanne.Taylor@lthtr.nhs.uk or by visiting the library.

Training Courses

If you would like to search for the information yourself, but are unsure about searching techniques or need a refresher course, we offer the following free training sessions for all Trust staff:

- Library Induction
- Literature Searching using NHS Evidence
- Literature Searching using PubMed
- The Cochrane Library
- NHS Evidence
- Evidence-Based Medicine and Critical Appraisal



More details are available on the Library Intranet pages. Places can be booked by contacting the Clinical Librarian on 01772 52(4763), by emailing Joanne.Taylor@lthtr.nhs.uk, by visiting the library or by filling in the online training forms on the Trust intranet or internet pages.

Useful books

The following books are available from the Trust library.

Aveyard, Helen (2010) *Doing a literature review in health and social care: a practical guide*. 2nd edition. Milton Keynes, Open University Press.

Aveyard, Helen and Sharp, Pam (2009) *A beginner's guide to evidence based practice in health and social care*. Milton Keynes, OUP.

Craig, J. and Smyth, R. (2007) *The evidence-based practice manual for nurses*. 2nd edition. Churchill Livingstone.

Hutchfield, Kay (2010) *Information skills for nursing students*. Exeter, Learning Matters Ltd.

Moule, P, and Hek, G. (2011) *Making sense of research: an introduction for health and social care practitioners*. 4th edition. London, Sage.

Moule, P. and Goodman, M. (2009) *Nursing research: an introduction*. London, Sage.

Other evidence-based resources

The Cochrane Library

<http://www.thecochranelibrary.com>



NHS Evidence

<http://www.evidence.nhs.uk/>

National Institute for Health and Clinical Excellence (NICE)

<http://www.nice.org.uk/>

Department of Health

<http://www.dh.gov.uk/>



Map of Medicine

<http://www.mapofmedicine.com/>



TRIP

<http://www.tripdatabase.com/>



Education Centre 1
Royal Preston Hospital
Sharoe Green Lane
Preston
PR2 9HT

Tel: 01772 522763

E-mail: library.rph@lthtr.nhs.uk

Education Centre 3
Chorley and South Ribble DGH
Euxton Lane
Chorley
PR7 1PP

Tel: 01257 245606

E-mail: library.cdh@lthtr.nhs.uk

www.lancsteachinghospitals.nhs.uk