

Literature Searching

Searching the Evidence Base

Plan of Session

- OpenAthens registration
- Formulating a search
- Developing a search strategy
- Searching the databases
- Understand Thesaurus Mapping
- A to Z Journal List

Learning Objectives

- At the end of this course, all participants will be able to:
 - Know how and where to find information resources
 - Identify several keywords for a concept
 - Use AND, OR and NOT to construct a search strategy
 - Understand the use of thesaurus mapping

OpenAthens Registration

For access to all online resources you will need to register for an NHS OpenAthens username/password

<https://openathens.nice.org.uk/>

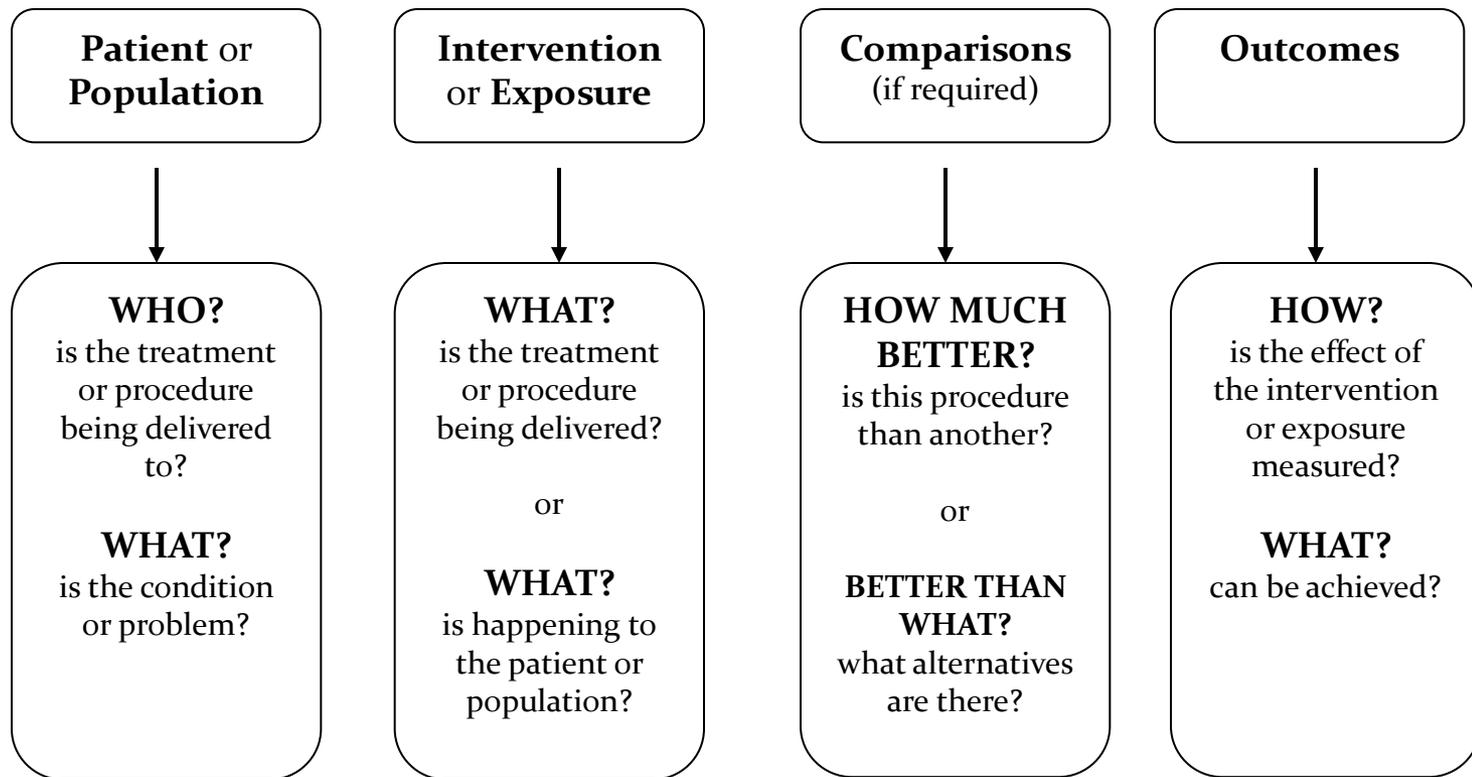
*You must register using a Trust PC
and your Trust email address*

Search Strategy

“Is CPAP the best way to manage paediatric patients with bronchiolitis? Are there any randomised controlled trials to support this?”

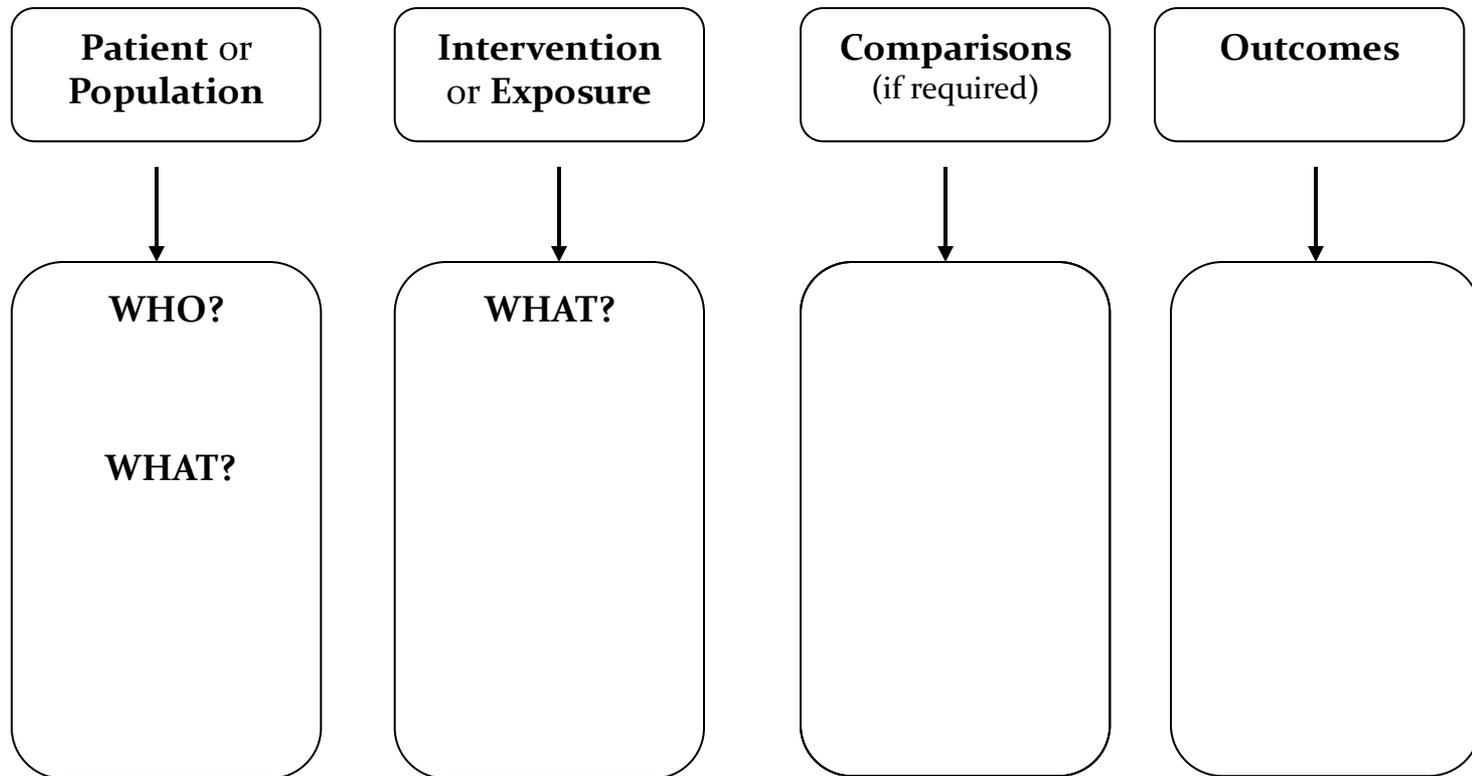
The PICO Approach

How can we transfer the results into a searchable structure?



Exercise 1

“Is CPAP the best way to manage paediatric patients with bronchiolitis? Are there any randomised controlled trials to support this?”



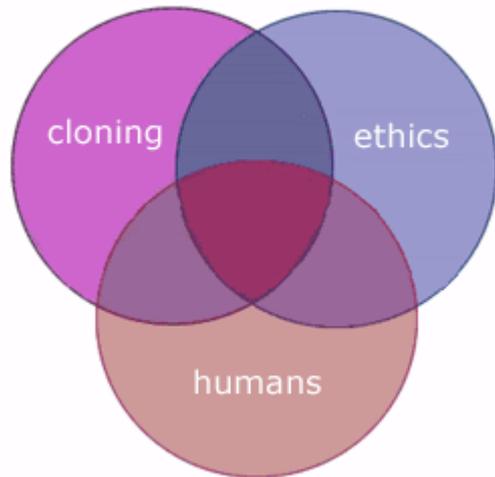
Searching the evidence

- What search tools do you use?
- The NHS subscribes to eight healthcare databases
- Access via **NHS Evidence**

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

Database Tips

AND

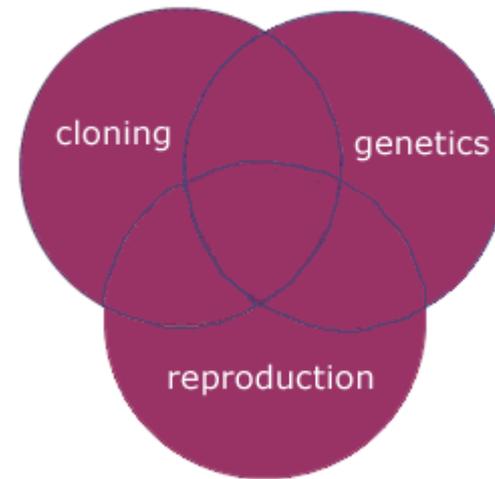


Use AND in a search to:

- narrow your results
- tell the database that **ALL** search terms must be present in the resulting records
- example: cloning AND humans AND ethics

The purple triangle in the middle of the Venn diagram below represents the result set for this search. It is a small set using AND, the combination of all three search words.

OR



Use OR in a search to:

connect two or more similar concepts (synonyms)
broaden your results, telling the database that ANY of your search terms can be present in the resulting records

example: cloning OR genetics OR reproduction

All three circles represent the result set for this search. It is a big set because any of those words are valid using the OR operator

Database Tips: Truncation

- Truncation is a form of searching often used in databases and library catalogues
- A “wildcard” symbol is used where a range of words or plurals could be relevant

CARDI*

OVASCULAR

OLOGY

AC

OGRAM

OGRAPH

OGRAM

OPULMONARY

OMYOPATHY

More Database Tips

- Truncat* & “Bool* Operat*” - *, ADJ2, ?, “”,
- Search ALL options but BE SPECIFIC
- Limit by Date
- Remove Duplicates
- Sort Results
- View Abstracts - Appraise

Find the Article!



<input type="checkbox"/>	1	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	paediat*.ti,ab	11542
<input type="checkbox"/>	6	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	newborn*.ti,ab	13650
<input type="checkbox"/>	7	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	infant*.ti,ab	50060
<input type="checkbox"/>	8	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	teen*.ti,ab	75590
<input type="checkbox"/>	9	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	adolesc*.ti,ab	54771
<input type="checkbox"/>	10	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	child*.ti,ab	2946244
<input type="checkbox"/>	11	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	pediat*.ti,ab	44232
<input type="checkbox"/>	12	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	1 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11	378266
<input type="checkbox"/>	13	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	cpap.ti,ab	12628
<input type="checkbox"/>	14	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	"continuous positive airway pressure".ti,ab	1387
<input type="checkbox"/>	15	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	13 OR 14	1814
<input type="checkbox"/>	16	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	rct*.ti,ab	6045
<input type="checkbox"/>	20	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	"random* control* trial*".ti,ab	32232
<input type="checkbox"/>	21	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	(random* ADJ2 trial*).ti,ab	55653
<input type="checkbox"/>	22	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	16 OR 20 OR 21	56561
<input type="checkbox"/>	23	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	12 AND 15 AND 22	71
<input type="checkbox"/>	25	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	23 [Limit to: Publication Year 2009-2014]	38
<input type="checkbox"/>	26	AMED, EMBASE, HMIC, MEDLINE, PsycINFO, BNI, CINAHL, HEALTH BUSINESS ELITE	Duplicate filtered: [23 [Limit to: Publication Year 2009-2014]]	38 37 Unique results 1 Duplicate results

Thesaurus Mapping

- For example, “Cerebral vascular accident” is a subject heading which covers all the words & phrases used for the concept stroke.
- Each database uses a different list of subject headings.
- Not every term will have a suitable thesaurus term.
- New articles are added to the database before being assigned subject headings. Search using keywords as well.
- Helps overcome inconsistent terminology, alternative terms and spellings

How are subject headings arranged?

- Subject headings are arranged in a hierarchy or tree structure,
- Broad subjects are subdivided into more specific topics.

This picture shows part of the Medical Subject Headings (MeSH) hierarchy in Medline. Narrower, more specific terms (e.g. ear) are indented under broader terms (e.g. head). The yellow helps you keep track of which part of the hierarchy you are viewing.

You are currently browsing Medline

Thesaurus > Anatomy (Non MeSH) > Body Regions > Head

	Select	Explode	Major	Subheadings
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Anatomy (Non MeSH)				
- Body Regions [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Anatomic Landmarks [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Breast [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Extremities [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
- Head [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ear [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Face [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scalp [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Skull Base [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Neck [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Quick Exercise 2

Using Thesaurus Mapping

- You will need to be logged in with your NHS Athens password. Go to the NHS Evidence Healthcare Databases advanced search at <http://www.library.nhs.uk/booksandjournals/advanced/default.aspx>
- Enter your search term, e.g. healthcare staff, and tick the „Map to Thesaurus“ box. Click „search“.

The screenshot shows the search interface with the following elements:

- A search input field containing the text "healthcare staff".
- A dropdown menu next to the input field.
- The text "IN" followed by a list of search criteria:
 - Title and Abstract
 - Any field
 - Publication Type
 - Title
 - Journal Name *
 - Abstract
 - Author *
 - ISSN
- A checkbox labeled "Map to Thesaurus" which is checked.
- A question mark icon next to the "Map to Thesaurus" checkbox.
- A note: "* For Author and Journal name enter search terms in 'quotation marks'." followed by a question mark icon.
- A "Browse Thesaurus" button.
- A "Search" button.

Terms which match the concepts of your keyword search will then be displayed. Select appropriate terms from the list, by ticking the correct box in the “select” column. Then click search.

You are currently browsing Medline

Thesaurus

	Select	Explode	Major	Subheading
+ Health Personnel [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Great Britain [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Medical Staff [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Nursing Staff, Hospital [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ State Medicine [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Carrier State [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Cross Infection [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Attitude of Health Personnel [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Nursing Staff [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Sexual Harassment [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Any selections made from this list will be OR searched. Select only similar or alternative terms for your keyword.

- You may wish to use the **exploded**, **major descriptor** or **subheadings** options instead.
- Ticking the **Exploded** box will expand your subject, searching for your term plus any related and narrower terms. To see which terms will be included if you tick **Exploded**, click on the grey subject heading itself. You may need to scroll both up and down the page to see all the information you need. Related and narrower terms for the term **Health personnel** are shown in the darker grey shaded area below.

You can click on any one of these terms to go to its place in the thesaurus hierarchy where it appears next to closely related terms: you may find other terms there that you wish to add to your search

Thesaurus > Named Groups (Non MeSH) > Persons > Occupational Groups > Health Personnel

	Select	Explode	Major	Subheadings
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Foreign Professional Personnel [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
- Health Personnel [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Allied Health Personnel [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Anatomists [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Caregivers [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Coroners and Medical Examiners [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Dental Staff [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Dentists [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Faculty, Dental [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Faculty, Medical [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Faculty, Nursing [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Health Educators [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Health Facility Administrators [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Infection Control Practitioners [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Medical Chaperones [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

How do I know if I have done a thesaurus search?

- A search history using the thesaurus is displayed below. If / appears after the search term, it shows the thesaurus was used. **Exp** before the search term shows an exploded search was used. ***** before the search term shows the **major descriptor** option was used. Subheadings appear after the search term, as shown in search 5 below where the subheading **psychology** appears after the term **health personnel**.

Search history

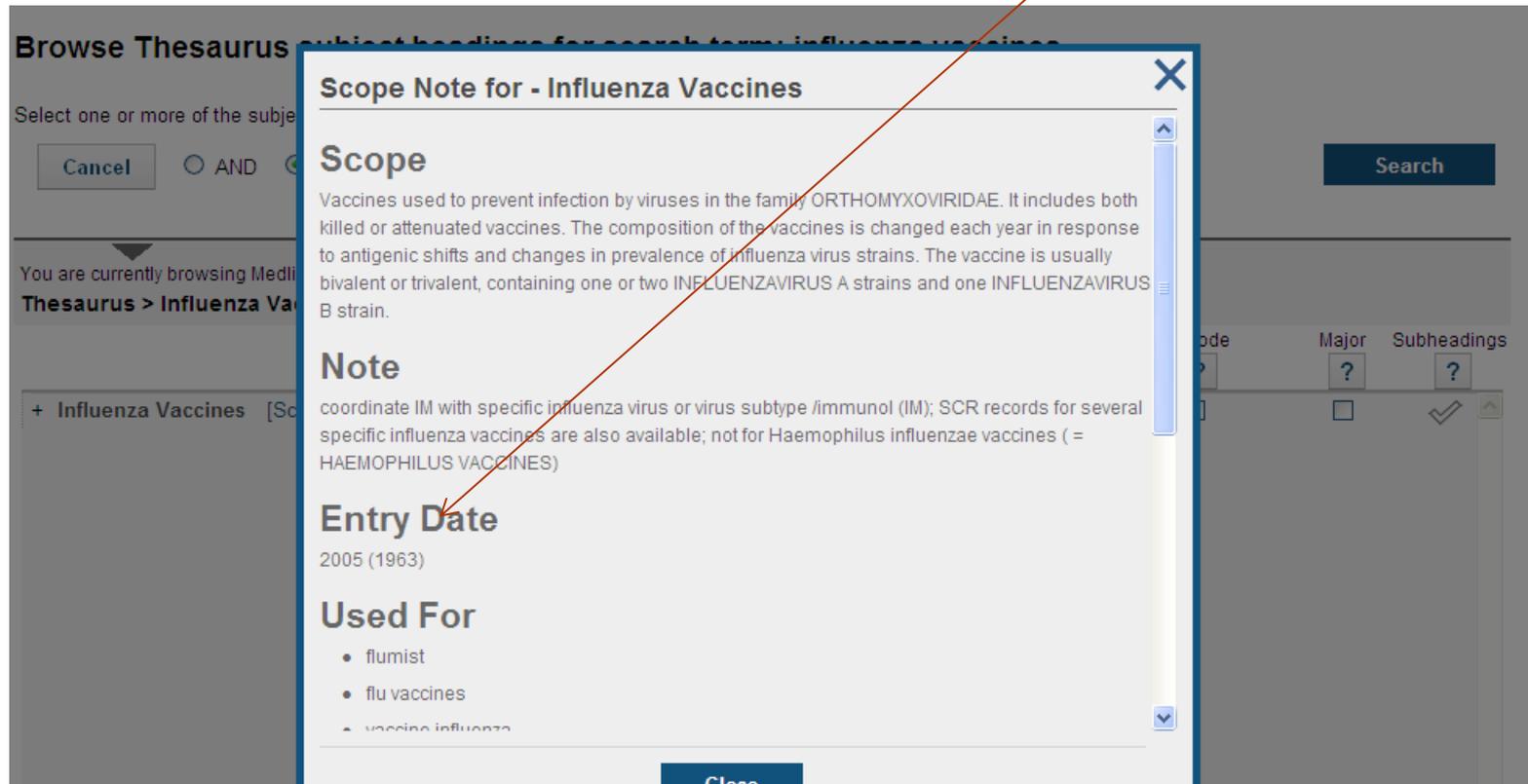
Line	Database	Search Term	View Results
<input type="checkbox"/>	1	MEDLINE expHEALTH PERSONNEL/	339152
<input type="checkbox"/>	2	MEDLINE INFLUENZA VACCINES/	13966
<input type="checkbox"/>	3	MEDLINE *SICK LEAVE/ OR *ABSENTEEISM/	4466
<input type="checkbox"/>	4	MEDLINE 1 AND 2 AND 3	9
<input type="checkbox"/>	5	MEDLINE HEALTH PERSONNEL/px [px=Psychology]	2483

Select All ?

AND OR To combine two line numbers using NOT, enter the line numbers in the search box below: for example 1 NOT 2

What are scope notes and why should I read them?

- Scope notes are thesaurus definitions. To see the scope note, click on the word **scope** next to the term.
- Along with a definition the scope note usually also tells you the year the MeSH heading was added to the thesaurus. It may give any previous terms that were used which you might need to search with. If in doubt about using a thesaurus term – read the scope note.



The screenshot shows a web interface for browsing thesaurus terms. A modal window titled "Scope Note for - Influenza Vaccines" is open, displaying the following information:

- Scope:** Vaccines used to prevent infection by viruses in the family ORTHOMYXOVIRIDAE. It includes both killed or attenuated vaccines. The composition of the vaccines is changed each year in response to antigenic shifts and changes in prevalence of influenza virus strains. The vaccine is usually bivalent or trivalent, containing one or two INFLUENZAVIRUS A strains and one INFLUENZAVIRUS B strain.
- Note:** coordinate IM with specific influenza virus or virus subtype /immunol (IM); SCR records for several specific influenza vaccines are also available; not for Haemophilus influenzae vaccines (= HAEMOPHILUS VACCINES)
- Entry Date:** 2005 (1963)
- Used For:**
 - flumist
 - flu vaccines
 - vaccine influenza

The background interface shows a search bar, a "Search" button, and a table with columns for "code", "Major", and "Subheadings". A red arrow points from the word "scope" in the first bullet point of the text above to the "Scope" section of the modal window.

Complex Queries

- Subject filters are specialized search strategies, each developed in consultation between librarians and subject specialists at NIH institutes and elsewhere. You can view the [strategies in detail](#).

A to Z Journal List

- Athens username/password required
- Don't forget sites like freemedicaljournals.com for free access to journals. Beware the embargos!

The screenshot shows the NICE website's 'Journals and databases' page. The page has a dark header with the NICE logo and navigation links. Below the header is a search bar and a breadcrumb trail: Home > About > What we do > Evidence Services. The main content area is titled 'Journals and databases' and includes a sub-header: 'Quick access to reliable information for health and social care professionals. Search journals, databases, e-books and specialist evidence.'

There are two main search options:

- Healthcare databases advanced search (HDAS)***: Search databases AMED, British Nursing Index, CINAHL, EMBASE, HMIC, MEDLINE, PsycINFO, and Health Business Elite. A button labeled 'Begin an advanced search' is present.
- PubMed (simple) search**: A quick search of PubMed (no OpenAthens account required). A button labeled 'Begin a PubMed search' is present.

Below these are sections for 'Databases*' and 'Journals'. The 'Journals' section is circled in red and contains:

- [A-Z list of nationally available journals](#)
- [Sign in to OpenAthens to see extra content purchased in your region](#)

Other sections include 'Specialist evidence resources' with a link to 'Cochrane library' and 'OpenAthens'.

Library outreach service



The library
Level 5, Education Centre
Upper Maudlin St

Tel. ext. 20105

Email. library@uhbristol.nhs.uk