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Guide to Searching Effectively in Palliative Care

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Introduction

This guide introduces you to key concepts when searching bibliographic databases. There are many different databases, each indexing published literature in different subject areas. For example, the Medline database indexes a large number of life science journals, with a particular focus on biomedicine, and the CINAHL database concentrates on indexing journals in nursing and allied health fields. Importantly, there is no single database that indexes all of the world's health literature. Depending on what you need to find, you may need to search a range of databases.

Bibliographic databases provide you with references (also known as citations) for articles published in the journals they select for indexing. These references typically include authors' names, article titles and source details (journal name, volume and page numbers). Increasingly many of these databases also include links to full text documents.

These databases may be available freely (such as PubMed), or on a subscription basis (eg EMBASE). Often institutional libraries pay annual subscriptions to enable their staff members to access highly relevant databases.

This guide covers six topics, but deals with no one database in particular. Palliative care examples are given throughout the guide to illustrate certain points.

Section 1   Developing a Search Strategy
Section 2   Textword and Subject Searching
Section 3   How Database Subject Indexing Works
Section 4   Combining Searches
Section 5   Lists of Key Subject Headings relevant to Palliative Care
Section 6   Sample Searches in Palliative Care & Searching Tips

Section 1 Developing a Search Strategy

Whether you have a clinical question or are undertaking a literature review, the first step is to develop a plan.

This usually consists of several important stages:
- Identifying the question you want to answer and the key concepts of interest
- Deciding which research designs (ie, best type of evidence) would best answer your question
- Identifying relevant sources
- Searching relevant sources

Example

Scenario: Suppose a patient approaches you about taking St Johns Wort for her depression.

Would it help her? As suggested above, you need to
- Define your question
- Select appropriate research designs
- Select databases
- Search databases

Define Your Question

The key question is about the effectiveness of St Johns Wort. However, a little thought will show that it comprises many discrete questions, such as: Is there a benefit? What is the nature of the benefit? Is it better than traditional anti-depressants? Are there any harms? Does it interact with other medications?

One way to help you frame a question is to use a model known as PICO. What is the Population, Intervention, Comparison and Outcome of interest?

In this case,

P (population) = People with depression
I (intervention) = St Johns Wort
C (comparison) = Antidepressants or no treatment
O (outcome) = Reduction of depressive symptoms

We could now frame this question aided by PICO: "Is St Johns Wort more effective than traditional antidepressants in the treatment of depression ...?"

Not all questions will have all of these elements. However thinking about them will help you to determine exactly what you are interested in, and later may assist you in constructing a search strategy.

Select Appropriate Research Designs

Different questions are best answered by different research designs. What type of evidence would answer your question? Various authorities have produced 'Levels of Evidence' guides that identify which specific research designs best match certain questions. The National Health & Medical Research Council (NHMRC) is currently developing Australian levels of evidence and grades for recommendations for guideline developers (http://www.nhmrc.gov.au/consult/#c). This is similar to the longer standing table produced by The Centre for Evidence Based Medicine in Oxford, UK (http://www.cebm.net/levels_of_evidence.asp).

By consulting either table, a systematic review of randomised controlled trials will be identified as the highest level of evidence for a question about therapy. As our example question is indeed about a therapy (St Johns Wort), a systematic review of randomised controlled trials would be the most robust evidence to inform our practice.

Note that the highest levels of evidence may not exist for different topics. Some studies do not lend themselves to certain study designs. For example, a randomised controlled trial might theoretically be the best study design to evaluate the effects of an intervention. But consider the real world instance where a disease has a very low incidence rate. If only 2-3 cases arise per year, it would be difficult to recruit sufficient participant numbers for such a study design. However other designs, such as a case control study or cohort study could still effectively be used. This is why levels of evidence exist; you should look for the highest level of evidence available.

Select Databases for Searching

There are literally thousands of databases available. Some databases (those publicly and freely available) are listed as weblinks in the 'databases and resources' section of CareSearch. These include PubMed (Medline and PubMed Central), PubMed Clinical Queries, and the Cochrane Library.

PubMed/Medline

There are clear differences between PubMed and Medline, but they often need some explanation.

PubMed is the publicly available, searchable system that provides access to a range of data subsets, including Medline, PubMed Central journals, and records waiting to be fully indexed for Medline (these are called "Medline - in process" records; it can take up to 2 years for some articles to be fully indexed).

When searching PubMed, by default you will search for records *in all of its subsets*. This is most commonly what searchers want to do (although it is possible to override this default so that you can only search either the Medline or the PubMed Central data subset).

- Medline is the subset that indexes a finite range of approximately 5250 selected journals. These bibliographic records are packaged and sold to vendors who provide access to the same records through a different interface (eg, OVID, EBSCO). Note that some palliative journals, such as BMC Palliative Care and Progress in Palliative Care, are not indexed in Medline.
- PubMed Central is the subset that represents a free digital archive of biomedical and life sciences journal literature, ie, freely available full text journal articles. BMC Palliative Care is an example of a journal indexed in PubMed Central.

PubMed Clinical Queries

This is not a separate database to PubMed. It is a different searching interface provided to help busy clinicians quickly find specific types of research designs, including systematic reviews, on PubMed. It searches the same underlying set of records using specially developed filters.

The Cochrane Library

This houses a collection of useful databases, including the Cochrane Database of Systematic Reviews (CDSR), which indexes a range of systematic reviews produced by the Cochrane Collaboration Collaborative Review Groups. International in membership, the Cochrane Collaborative Pain, Palliative and Supportive Care Group is active in supporting and generating systematic reviews in pain, palliative and supportive care.

The Database of Abstracts of Reviews of Effects (DARE) is also included in the Cochrane Library. These abstracts are brief 'appraisals' of non-Cochrane systematic reviews. While these abstracts are useful in their own right, DARE, by default, is actually also an index of systematic reviews not indexed in the CDSR.

Other Major Bibliographic Databases

There are other relevant, subscription-based databases that contain information relevant to palliative care. You should check to see whether you have access to these, and others, through your institution's library. Some of the databases known to contain relevant palliative and supportive care content include:

CINAHL (Nursing and Allied Health)
EMBASE (Biomedicine and Pharmacology)
PsycINFO (Psychology)
AgeLine (Aged)
AMED (Alternative Medicines)

While these are major databases, there are literally 1000s of potentially useful databases that may be relevant. For example, the ALTA Religion Database indexes articles on death, suffering, bereavement and terminal care. If you require a systematic search in relation to palliative care, eg, if you are writing a systematic review, you should consult specialist sources and information professionals regarding the range of possibly relevant databases for inclusion.

Where do you go first?

It is common practice to go to PubMed first and start searching. Yet it is possible to embark on a quicker, more targeted approach than starting with a broad search of PubMed. Consider the St Johns Wort example discussed earlier. A systematic review of randomised controlled trials was identified as the best type of research design to answer this question.

Both PubMed Clinical Queries, and the Cochrane Library would enable us to quickly and selectively search for a systematic review on our topic. Evidence based guidelines can also provide a similar level of evidence to systematic reviews (various web links are also provided on CareSearch to help you identify such guidelines). For clinical questions these strategies will save time because they selectively provide access to higher levels of evidence.

Search the Chosen Databases

If you are searching the larger bibliographic databases, such as PubMed, EMBASE etc, it will be necessary to technically construct a formal search strategy. However for many of the other online resources, including PubMed Clinical Queries, this may not be necessary. It will depend on your topic and the resource itself. Sometimes a simple search may be sufficient.

Using the PICO model, the concepts for searching have already been identified for our example. In deciding search terms, first select the most unique concept. In our example, it is St Johns Wort. This can be entered in the search box in the 'Find Systematic Review' section of PubMed Clinical Queries. A list of references to systematic reviews on this topic will be retrieved. Compare this approach to the traditional approach of a structured search on PubMed. It is quicker, retrieves a more manageable number of references, and uses a quality filter (systematic reviews rather than everything, which could include more peripheral matters such as letters, opinion etc).

If you did not find any systematic reviews, the next step would be to use the PubMed Clinical Queries option of "Search by Clinical Category". By selecting 'therapy' in the question category box, and then adding your subject search, PubMed will look for the sort of studies that best answer questions about therapy, ie, randomised controlled trials. By selecting a 'sensitive' search, a larger number of relevant articles will be retrieved, but so too will irrelevant ones. A 'specific' search will yield less, and whilst you may exclude some relevant citations, you will also exclude a larger number of the irrelevant ones. Someone undertaking a systematic review might prefer a sensitive search, but a busy clinician might prefer a specific search.

Section 2 Textword and Subject Searching

When searching the Web you typically enter the words that best describe your topic of interest. Using Google as an example, you might type in the word dyspnoea. Google would then search for records that include this word. These are known as textwords, and more structured databases such as PubMed, CINAHL etc also allow you to search using textwords. There are both advantages and drawbacks to using these in such databases, and understanding the differences between textwords and subject headings will help you to search more effectively.

Textword Searching

Textwords reflect natural language patterns. An Australian would use the term dyspnoea; an American would prefer dyspnea (note the different spelling). Whilst one country might use the term complementary therapies, another might use natural therapies. So if you searched for complementary therapies and dyspnoea, the search results would not identify those records which used the alternative terms. You also might miss plural or singular forms of a word, or variations of a word. In our example, we could miss therapy by including the word therapies, and we would miss dyspnoeic by using dyspnoea.

Using textwords efficiently means identifying all of the alternative terms that might be used to describe the concept of interest, including different spellings, tenses, and plural versions. This can be difficult. Textwords can also retrieve high numbers of irrelevant articles. Consider the word 'hand' as a textword. Such a search would uncover articles that included the words "on the other hand" or "hand it to" or "bargaining hand".

Textwords can be very useful. They are often the only way to search for emerging topics, and enable you to create a very broad search strategy. When combined with subject searching, they are powerful tools to help you uncover information of interest. When searching a more formal database such as CINAHL, a quick search using a highly relevant textword can be used to find articles on your topic of interest. By looking at how these relevant articles are indexed, you can identify the relevant subject headings, and construct a more structured search using these.

Subject Searching

Subject headings are also known as thesaurus terms. Different databases use different thesauri. This is usually because databases have different publishers, and the thesauri reflect unique differences in the subject coverage of the databases. This means, for example, that while all versions of Medline use MeSH terms (Medical Subject Headings), EMBASE and CINAHL have their own different subject headings.

Using MeSH as an example, indexers at the US National Library of Medicine nominate a range of MeSH terms to describe every article that is indexed for Medline. These terms can then be searched. Indexers follow rules to ensure consistency. For example, imagine two articles: one discusses complementary medicine, and the other alternative therapy. Both would be indexed with the MeSH term complementary therapies, as that is the preferred term.

Subject headings are used by databases with good reason. They enable the creation of specific, targeted subject search strategies. Often sub headings are also available. For example, complementary therapies has 20 subheadings such as complementary therapies/adverse effects, or complementary therapies/nursing or complementary therapies/legislation & jurisprudence.

Textword Searching versus Subject Searching

Combining both approaches yields highly sensitive search results. Anyone undertaking a systematic review of the literature usually desires such a search. It is designed to be as broad as possible, to find every possible relevant reference. The price paid is often a very long list of possible citations, which includes irrelevant ones too. However, given that missing even one relevant randomised controlled trial could bias a systematic review, this is generally the approach preferred by reviewers.

Section 3 How Subject Indexing Works

Subject indexing differs according to the database you are using, but essentially subjects are organized into 'trees'. Simply, a tree is a hierarchical structure of subject headings. A subject heading can also appear in different trees.

Example 1: Hand
Suppose you were interested in the 'hand' as a topic. Here is an excerpt from the MeSH thesaurus which shows part of the tree structure to which it belongs:

             Upper Extremity
                         Arm
                         Axilla
                         Elbow
                         Forearm
                         Hand
                                 Fingers
                                         Thumb
                                 Metacarpus
                                 Wrist
                         Shoulder

There are three important features to note:
- Upper Extremity is the broader term, encompassing six narrower subject headings: Arm, Axilla, Elbow, Forearm, Hand and Shoulder.
- Hand is the broader subject headings for Fingers, Metacarpus and Wrist.
- Fingers is the broader subject heading for Thumb.

Example 2: Death
Here is an excerpt from the tree structure for the MeSH term of death.

             Death
                         Asphyxia
                         Brain Death
                         Cadaver
                                 Postmortem Changes
                                         Autolysis
                                         Rigor Mortis
                         Death, Sudden
                                 Death, Sudden, Cardiac
                                 Sudden Infant Death
                         Drowning
                         Embryo Loss
                         Fetal Death
                                 Fetal Reabsorption

Similar to the previous example:

- Death is the broader heading for seven narrower headings: asphyxia; brain death; cadaver; death, sudden; drowning; embryo loss and fetal death.
- Cadaver is the broader heading for the narrower heading of postmortem changes, which in turn is the broader heading for the narrower heading of autolysis and rigor mortis. And so forth.

To Explode or not to Explode

Most databases offer you an option of searching for an exploded subject heading. Using Medline as an example, exploding a MeSH term will include all references indexed with that term and also any terms that fall beneath it in its tree. Exploding a MeSH term is often sensible, but it depends on whether or not you are truly interested in every narrower term beneath it in its tree.

Using example 1, if you *explode upper extremity*, any citations indexed with any of the eleven terms above down to the most narrow term of Thumb will be retrieved. Compare this to *explode hand*, which would only retrieve those records indexed with any of the five terms of hand, fingers, thumb, metacarpus, and wrist. If you *explode fingers*, you would recover citations indexed with either of the two terms fingers or thumbs. By definition the most narrow terms such as thumb cannot be exploded.

Using example 2, whilst death is likely to be a useful heading in palliative care searches, to explode death may retrieve many irrelevant records. This is because it would retrieve any citations indexed with any of its 14 subordinate MeSH terms, including for example, fetal reabsorption.

You should note that a broader term does not automatically include the references beneath it. Indexers allocate the most specific MeSH terms available, so an article indexed with thumb, will not necessarily also be indexed with fingers, or hand. You need to explode the broader MeSH term, or else select individual MeSH terms of interest and combine them with 'or'.

Major and Minor Headings

Most databases nominate subject headings as major, or minor. Using Medline as an example, a major MeSH term means that an indexer considers that particular MeSH term to reflect the major focus of the article. An article can be indexed with several major MeSH terms. This means that you can limit a search to a subject considered to be the major focus of an article. It is a way of making your search more specific. Or, you can select a subject term whether it is flagged as being either major or minor. This will lead to a broader search.

The procedures for undertaking the above differ according to the structure and searching capacity of each database.

Section 4 Combining Searches using 'and' / 'or'

When searching, it is best to search for each term separately, and then combine the different concepts at the end. This will leave you with the greatest flexibility to adapt your search strategy if ultimately the results are either too broad or too narrow. The words **and** and **or** are most commonly used. These are also called Boolean Operators.

AND restricts searches: to be retrieved a reference must be indexed with every term searched. The more terms that are combined with 'and', the smaller the final number of references retrieved will be.

OR extends searches: to be retrieved a reference just needs one of the terms searched. The more terms you 'or', the greater the number of references retrieved will be.

A memory aid to recall the differences is: "**OR** is MORE" and "**AND** is LESS".

Combining Searches

Example

Using our original example, consider how a search might be conceptualised for "Is St Johns Wort more effective than traditional antidepressants in the treatment of depression?"

P (population)	=	People with depression
I (intervention)	=	St Johns Wort
C (comparison)	=	Antidepressants (or no treatment)
O (outcome)	=	Reduction of depressive symptoms

Let's assume that no systematic reviews already exist on the general topic. While different databases will use different terms and rules of searching, conceptually this question could be searched by combining all four concepts with the word 'and':

P **and** I **and** C **and** O

Using our actual concepts, this would mean:

People with depression **and** St Johns Wort **and** Antidepressants **and** Symptom Reduction

In practice, often there is no C (comparison), and you may be interested in all O (outcomes). So starting with a simple combination of the Population and Intervention is often the best approach:

P **and** I

Using our actual concepts, this would mean:

Depression **and** St Johns Wort.

To follow the example further ... this can be represented diagrammatically. Imagine each of the following circles represents every article in a database indexed with each of these terms:

Set 1: Depression
100,000 articles indexed

Set 2: St Johns Wort
10,000 articles indexed
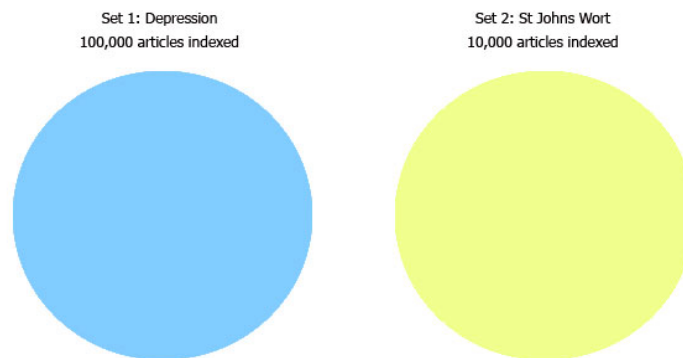
By combining the two concepts with the word **and**, the search is restricted to the intersection of these two sets. By definition, in our example, this new set cannot exceed 10,000 references. It will equal the number of references that are indexed with both terms, usually far less. In the diagram below, our example might retrieve 5,000 articles:

Set 3
Depression AND St Johns Wort
(5,000)

Depression
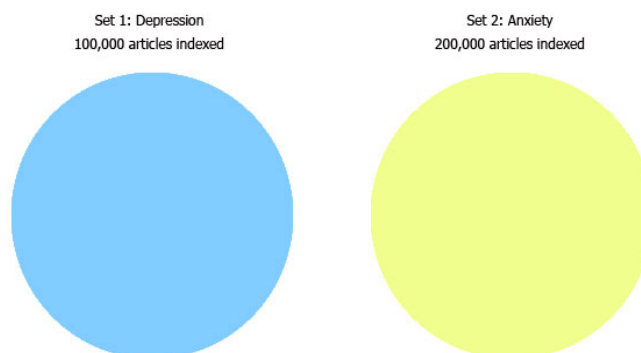(100,000)

St Johns Wort
(10,000)
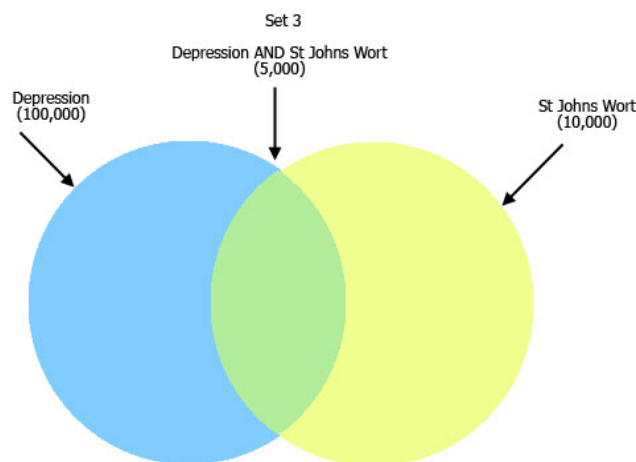
Remember, each database has its own language. It will automatically translate queries into its own notation. Each search term is usually given a set number to unique identify the records it retrieved. The example above might be noted as:
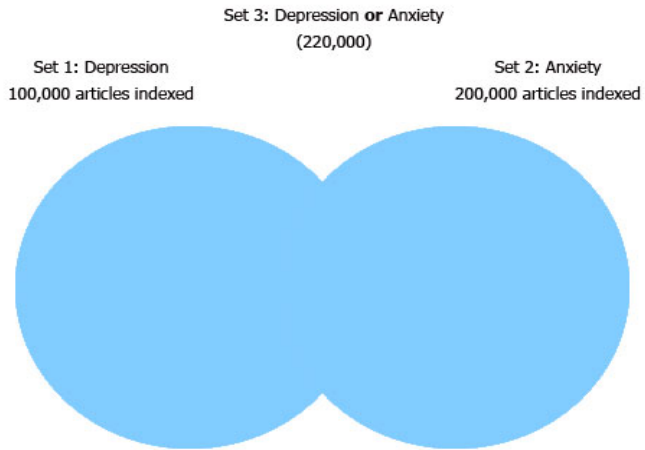
Set Number	Search	Hits
#1	Depression	100,000
#2	St Johns Wort	10,000
#3	#1 AND #2	5,000

Let's say we were also interested in this therapy for anxiety as well as depression, and we identified this when we first planned our search.

Set Number	Search	Hits
#1	Depression	100,000
#2	Anxiety	200,000
#3	#1 OR #2	220,000
#4	St Johns Wort	10,000
#5	#3 AND #4	6,000

Notice several points about this last search. First, the number of hits for Set 3 does not equal the total of hits for Set 1 added to Set 2. This is because there are some articles that will be indexed with both terms. Second, our final number of retrieved references is larger with the second search than the first (6,000 rather than 5,000). This is because we broadened our search by 20,000 hits by adding anxiety before we combined it with St Johns Wort. When combining concepts, always complete all 'OR' combinations first, and then 'AND' combinations, unless you have a specific reason for doing otherwise.

Set 1: Depression
100,000 articles indexed

Set 2: Anxiety
200,000 articles indexed

Set 3: Depression **or** Anxiety
(220,000)

Set 1: Depression
100,000 articles indexed

Set 2: Anxiety
200,000 articles indexed

Section 5 List of Key Subject Headings relevant to Palliative Care

The same concept may be represented by different subject heading in different databases. Key headings for commonly-used databases are listed below. This list is not exhaustive – just a place to start. Each database will provide 'scope' notes for each heading so that you can decide whether a heading is relevant to your search. Many of the subject headings listed herewith will have narrower, more specific terms that may be relevant. Check the relevant thesaurus for the complete tree structure to decide which terms best suit your needs. For example, you may wish to explode a given term (See: to Explode or not to Explode, Section 3)

Medline (Medical Subject Headings)

Advance Care Planning
Advance Directive
Alternative Medicine
Attitude to Death
Bereavement
Caregivers
Death
Euthanasia
Hospice Care
Hospices
Life Support Care
Palliative Care
Resuscitation Order
Terminal Care
Terminally Ill

CINAHL (Cumulative Index to Nursing & Allied Health Literature)

Advance Directives
Alternative Therapies
Attitude to Death
Bereavement
Death
Grief
Hospice and Palliative Nursing
Hospice Care
Hospices
Life Support Care
Living Wills
Oncologic Care
Palliative Care
Resuscitation Orders
Terminal Care
Terminally Ill Patients

EMBASE [Biomedicine & Pharmacology]

Alternative Medicine
Attitude to Death
Cancer Palliative Therapy
Caregiver
Caregiver Burden
Caregiver Support
Death
Dying
Euthanasia
Hospice
Hospice Care
Hospice Nursing
Living Will
Long Term Care
Palliative Therapy
Terminal Care
Terminal Disease
Terminally Ill Patient

PsycINFO [Psychology]

Advance Directives
Alternative Medicine
Assisted Suicide
Caregivers
Caregiver Burden
Death and Dying
Death Attitudes
Euthanasia
Grief
Hospice
Life Sustaining Treatment
Palliative Care
Suffering
Terminal Cancer
Terminally Ill Patients
Treatment Withholding

AARP Ageline [Aging]

Advance Directives
Alternative Medicine
Attitude toward Death
Bereavement
Care Receiver
Caregiver Education
Caregivers
Caregiving Burden
Caregiving Rewards
Death
Death of a Spouse
Dying
Euthanasia
Grief
Grief Counseling
Hospice
Life Sustaining Treatment
Living Wills
Palliative
Terminal Care

Section 6 Sample Searches in Palliative Care

The exact syntax, rules and subject thesaurus for searching varies with each database. In order to illustrate some of the differences, two different searches undertaken using PubMed, OVID Medline, and OVID EMBASE are provided as examples below. In each case, the first column provides the set number allocated to a search by the database. The second column reflects the wording of the search statement exactly as might be entered by a searcher. The third column provides the number of 'hits' that the database found in response to that search statement.

Note that these searches were constructed to demonstrate certain features, and are not current, that is, the number of references retrieved is indicative only of the sort of results you might see.

Sample Question 1

Which complementary therapies are useful in treating dyspnoea?

PubMed

1	Complementary therapies [mh]	109269
2	Dyspnea[mh]	9180
3	1 AND 2	167

OVID Medline

1	Exp complementary therapies/	105128
2	Exp dyspnea/	8675
3	1 and 2	163

OVID EMBASE

1	Exp alternative medicine/	22703
2	Exp dyspnea/	8671
3	1 and 2	27

Learning Points

- In OVID, the '/' sign after a term means that the searcher has identified this term as a subject heading in the thesaurus.
- In OVID, the exp notation in front of a subject heading means 'explode', that is, there are narrower subject headings for those terms and by including exp, these will also be included. In PubMed, MeSH terms are automatically exploded unless you specifically direct it NOT to explode a term.

- Don't be put off by large numbers of hits like 105128. Once a search is combined using 'and' it can rapidly reduce in its size.
- There are different numbers of hits in different databases – this is because they index different journals
- Note how PubMed and EMBASE use different terms for the same concept of complementary medicine. Also note that sometimes they are the same, as in dyspnea.
- Note that dyspnea is the American spelling…this is what the thesauri prefer. Any article about dyspnea which originates from a journal that publishes using UK spelling, would be indexed with the US spelling.
- Even though all of the OVID databases are different, notice that the syntax is uniform – if you learn how to search using the OVID structure in one database, you can use those skills in another OVID database.

Sample Question 2

Which studies have used the SF-36 questionnaire to measure quality of life in patients with dyspnoea?

PubMed

1	sf36	265
2	sf-36	4537
3	"short form 36"	1980
4	dyspnea	22374
5	dyspn*	22720
6	#1 OR #2 OR #3	5477
7	#4 OR #5	22720
8	#6 AND #7	81

OVID Medline

1	sf36.mp.	243
2	sf-36.mp.	4185
3	"short form 36".mp.	1865
4	exp dyspnea/	8675
5	dyspn$.mp.	21557
6	#1 or #2 or #3	5079
7	#4 or #5	21557
8	#6 and #7	80

OVID EMBASE

1	Short form-36/	860
2	sf-36.mp.	4185
3	sf36.mp.	252
4	"short form 36".mp.	2457
5	Exp dyspnea/	22703
6	dyspn$.mp.	28539
7	1 or 2 or 3 or 4	5258
8	5 or 6	28830
9	7 and 8	94

Learning Points

- Note that there is no MeSH term for this particular questionnaire. Yet EMBASE does have a term.
- All concepts have been searched one per line, and then combined at the end.
- All 'or' combinations were completed before the 'and' combinations. These must always be capitalised in PubMed, that is, AND; OR.
- The use of 'or' leads to more hits. The use of 'and' retrieves fewer hits.
- The .mp. is OVID syntax for textword searching.
- The '$' sign in OVID set 7 searches, finds any word that uses the stem of dyspn.
- The use of "double quotes" searches for phrases.

General Searching Tips for Bibliographic Databases

Several strategies are useful in most bibliographic databases, although each database has its own preferred syntax and rules. Three key strategies are: truncation; phrase searching; wildcards. Check the Help facility on the database you wish to use to find out more about these functions.

Truncation

Nearly every bibliographic database will offer you the use of truncation. It is a shorthand way of searching for plurals and variations on a word stem, by using a symbol to designate all possible variations.

For example, to search for every variation of the concept of 'palliative' as a textword on PubMed, you could use palliat*. This would retrieve articles using the terms palliat*ive* or palliat*ion* or palliat*ing* or…[any other term beginning with palliat]. Effectively it combines all possibilities with the Boolean Operator 'or', hence broadens the search (retrieving more references).

Phrase Searching

This enables you to search for a string of words next to each other. For example, on PubMed the use of "quote marks" to command the search to look for the words contained within those symbols. For example "end of life care" will look for that exact phrase. However, in the case of PubMed, it will also turn off a default setting where the search automatically is mapped to MeSH Headings. It is easy to inadvertently narrow your search (retrieving less references). If you intend to undertake phrase searching on PubMed, you should familiarise yourself with how the system interprets your search by following their online help.

Wildcards

These enable you to search for variations within a word. For example, on OVID databases, the wildcard of '#' enables you to search for variations on 1 digits. Wom#n for example, would search for woman or women. The wildcard of '?' enables you to search for 0-1 digits. Dyspn?ea, for example, would search for alternative UK/USA spellings, that is, either with or without the third letter, so would retrieve articles with the word 'dyspnea' (USA spelling) or 'dyspnoea' (UK) spelling (retrieving more references). Effectively it combines all possibilities with the Boolean Operator 'or', hence broadens the search (retrieving more references). Not all databases offer you the use of wildcards.