

Trust Library and Knowledge Service Literature searching protocol

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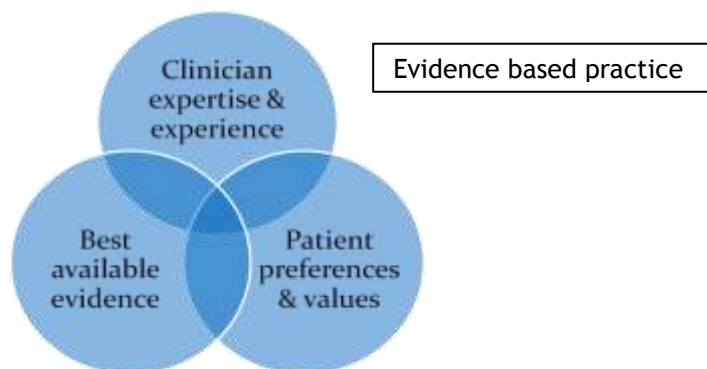
1 Literature search requests

1.1 What is a literature search?

A literature search is a thorough and organised search for all the literature (evidence) published on a topic.

Health professionals are required to perform 'evidence based practice'. Evidence based practice means that alongside their own knowledge/experience and patient values, the health professional takes into account research evidence in order to make decisions about patient care.

To effectively perform evidence based practice, health professionals require support in identifying the most relevant research evidence in their area of interest.



1.2 Mediated and assisted searches

A mediated search is one conducted by the librarian on behalf of the health professional. A mediated search is useful when the health professional is lacking the time and/or skills to conduct a search themselves.

An assisted search is one conducted by the librarian and the health professional together. An assisted search is useful if the health professional is keen to learn some searching skills and is a good training opportunity.

1.3 Occasions when we'd offer a mediated literature search

We offer literature searches to all eligible staff undertaking the following activities:

- Direct patient care (decisions about patient treatment and conditions)
- Clinical audit (reviewing current clinical practice against accepted guidelines or standards)
- Development of care pathways / protocols / guidelines (used to standardise health care processes)
- Professional development (preparation for clinical teaching, presentations, interviews, Journal Clubs)
- Research activities
- Service planning and decision making (may include management and business decision making)

1.4 Occasions when we wouldn't offer a mediated literature search

We wouldn't offer a literature search on the following occasions:

- A search for a specific document or website (this would be classed as an enquiry).
- An essay/assignment question for personal academic qualification (academic rigour requires that student undertake their own searches).
- A question that could be answered from a book (e.g. a nursing procedure).

- A search required for personal reasons (not work-related), e.g. after-dinner speech, information for a personal health condition.

As an alternative to a mediated literature search, an assisted search or attendance on a library training session may be more appropriate.

1.5 Receiving search requests

Search requests are received in person, by telephone, by email or via the library website. Where possible encourage the requester to complete the online search request form on the website so that as much detail about the search can be captured as possible.

Where the search request arises outside the library (e.g. on a ward or in a meeting), it may be more appropriate for the paper request form to be completed (either by the requester or the librarian).

Where a paper request form is completed, the search details should be copied into the online request form on the library website.

Processing all search requests through the online request form allows us to maintain a consistent and efficient service.

1.6 Administrative process

Search requests received via the library website are processed by the Library Assistants. Further details of this process are available from the Literature Searching administrative procedure (available on the S drive at S:\Groups\Education Centre\Library\0_NEW_S_DRIVE_NOV_2008\OPERATIONS\Procedure Manual\New Procedures\Literature searches).

Details of all search requests are recorded centrally on the Activity Tracker where they are assigned a reference number (available on the S drive at S:\Groups\Education Centre\Library\0_NEW_S_DRIVE_NOV_2008\OPERATIONS\Statistics\LKS statistics 2015-2016). The Library Assistant will ensure all details of the search are transcribed onto the Activity Tracker along with the initials of the librarian undertaking the search.

All completed search reports and accompanying notes are stored electronically and not in paper format (on the S drive at S:\Groups\Education Centre\Library\0_NEW_S_DRIVE_NOV_2008\SERVICES\Literature Searching Service).

1.7 Distributing searches amongst the team

All search requests received via the online form on the website go to the McArdle Library email address. The Library Assistants pick up the search request, process it and notify the Librarians by email.

A triage system shares out searches between all the professional librarians in the team.

The LKS Lead will liaise with the other librarians and decide who is to take the search based on:

- Preference (who has worked with the requester previously?)
- Experience (who has experience of this subject area?)
- Workload (who has the capacity to take on the search?)

The librarian who has agreed to conduct the search will liaise with the requester to gather further details about the search. The librarian will then determine whether the request requires a mediated search, an assisted search or a training session using the following criteria:

- The purpose of the search (requests for personal development purposes may be more usefully satisfied with an assisted search)
- When the results are required by (a short deadline may be more easily satisfied with a mediated literature search)

2 Before starting the search

2.1 Performing a scoping search

A scoping search can provide you with useful background information about the topic you are searching. It is often useful to perform a scoping search before you speak to the requester so that you can more easily understand their area of interest.

You may find the following resources useful in helping you to obtain a basic understanding of the topic.

Resource	URL
Patient UK	www.patient.co.uk
NHS Choices	www.nhs.uk
Pubmed Health	http://www.ncbi.nlm.nih.gov/pubmedhealth/
Mondofacto medical dictionary	http://www.mondofacto.com/dictionary/
BBC Health	www.bbc.co.uk/health
Wikipedia (use with caution!)	www.wikipedia.org
Google (use with caution!)	www.google.co.uk

A scoping search can be useful for the following reasons:

- Provides a good starting point – what is the condition?
- Provides a definition of medical conditions / treatments
- May provide some key search terms (acronyms or alternative spellings) – that can be used in a search strategy
- Gives an idea of how much evidence is likely to be available
- Offers a health and social context and may signpost key issues that have arisen in the media
- Shows what library users are likely to find if they ‘google’ the topic

A scoping search should help you to understand the question and can help you to work out what additional questions you need to ask the requester.

2.2 Contacting the requester

Even following a scoping search you are still likely to have questions about the search topic that you need to ask the requester. Even if you feel you understand the question from the search request form, it is good practice to contact the requester by telephone.

A verbal exchange lets the requester know that you have started working on the search and gives them the chance to give you any additional information they may have missed initially. It is also a good way of initiating a more personalised relationship with the customer.

You may like to let the requester know:

- What your understanding of their question is (and give them the opportunity to clarify).
- When you plan to begin the search.
- When they can expect results by.
- What sources you are likely to search and what types of evidence you might find (guidelines, journal articles, evidence summaries, examples from other trusts).

- How their search results will be presented.
- That they will require an NHS Athens account to access some search results.

You can also use this conversation as an opportunity to gather more information about their search question. If no limits have been specified on the request form you may wish to suggest a date limit as this is a good way of narrowing down a search that is likely to get a lot of results.

You may want to ask:

- What is current practice in this area?
- Why do you need the information?
- Can you give me some more background information?
- Are you expecting that there will be a lot of evidence in this area, or very little?
- Is the information required for a specific patient?
- Are you hoping to compare this with a different treatment / service?

Continue the conversation until you feel you have gained a thorough understanding of exactly what the requester wants.

2.3 Negotiating a deadline

The search request form requires the requester to state when they need the results by.

Our current service standard for returning literature searches is 10 working days from the date of receipt or by a deadline agreed with the requester (subject to staffing levels). These standards are published on the LKS website and are clearly displayed when the requester submits their search request form.

When the information is needed to inform decisions about patient care, search results may be required more quickly.

You may need to negotiate an extended deadline with the requester if you aren't able to complete the search in the timeframe specified due to staffing capacity or existing workload.

A good way to approach this is to ask directly if the requester is able to be more flexible with their deadline since you will struggle to complete the search by that date.

2.4 Devising a search strategy

There are several tools available that you might find useful as a starting point for developing a search strategy.

For clinical questions, using the PICO framework [Appendix 2] to break the question down into individual elements can help you to build a focused question.

You may also wish to use the Concepts framework [Appendix 3] to break any type of question into separate concepts from which you can generate key words to use as search terms.

These tools should help you to develop a focused question from which to begin your search.

3 Search techniques

For assistance with searching techniques please refer to the Library and Knowledge Service training materials available on the S drive.

3.1 Freetext and thesaurus searching

It is generally accepted that using a combination of freetext and thesaurus searching is the most effective way to conduct a thorough search and ensures you don't miss any relevant results.

Each database is different; some databases have a thesaurus and others don't. Where no thesaurus is available a freetext search alone is acceptable. Additionally, if no thesaurus term is available for your search topic you may decide to perform a freetext only search. If you're searching for a very specific term (e.g. a brand name), then obviously a thesaurus search would not be appropriate either.

3.2 Combining terms

Commonly the Boolean operators 'AND' and 'OR' are available in databases to combine search terms. Use OR to combine terms that mean the same thing (e.g. 'heart attack' or 'myocardial infarction'); use AND to combine two different elements of your search (e.g. 'common cold' and 'vitamin c').

At this point it is useful to have your search strategy (e.g. PICO framework) handy to refer to.

3.3 Limits

Different databases have different limits available that you can apply to your search. As a general rule, apply limits as the final step in your search. Commonly available limits include: date limit, language limit, human/animal studies limit etc.

The search request form should identify any relevant limits, if not, check with the requester. A date limit is most useful in narrowing down the number of results you retrieve, so if a date limit has not been specified on the request form it is worth checking with the requester.

3.4 Troubleshooting

What kind of search questions am I likely to encounter?

There are rarely two search questions that are the same. You may encounter any of the following:

- Traditional 'clinical' questions, such as, "how effective are exercise therapy programmes for improving muscle function in patients with chronic kidney disease?"
- More general health topics where the requester requires an overview of the subject, such as, "Can you find all the evidence on the management of pericardial effusion?"
- Service delivery or management questions, such as, "What evidence is there on the success of telephone follow-up services for radiotherapy patients?"

Have a look on the Activity Tracker at searches that have been undertaken to give you an idea of previous search topics.

How long should a search take?

The amount of time it takes for you to complete a search will vary according to the search topic, the scope of the search and your own experience. A search could take anything from one hour to one day. The Activity Tracker includes a column for you to record how long a search has taken; if you are likely to be interrupted while searching it may be useful to keep a note of your timings as you go along. You might find it helpful to use an online timer such as www.online-stopwatch.com/.

When do I stop searching?

Lack of confidence or lack of familiarity with resources can often make you uncertain of when you should stop searching. If you've found enough evidence to provide a reasonable answer to the search question then you've probably found enough and can stop searching. If you're unsure speak to a colleague or use the Clinical Librarian discussion lists for support.

What if I can't find anything?

If you're having difficulty finding any relevant results it may be because there is very little evidence on the subject. It is often worth asking the search requester how much evidence they would expect to be available, this often confirms that there is very little published evidence in that area. Speak to a colleague or use the Clinical Librarian discussion lists for suggestions of other resources you could try. If you're still not retrieving any useful results, go back to the requester and explain the situation. You can still send them whatever you have found, even if it does not exactly match their requirements. Knowing that there is little or no evidence on a topic can still be a useful answer.

What if I'm getting too many results?

The search topic is likely to be too broad. It may be worth contacting the requester and explaining the situation; they may be able to provide you with a narrower search question. Alternatively, you can concentrate on searching for high level evidence (e.g. guidelines, systematic reviews) and leave out lower quality sources of evidence (refer to 'Levels of Evidence' below).

4 Undertaking the search

4.1 Where to start

Where you start your search is often a matter of personal preference.

You may wish to begin by searching for the highest quality level of evidence (e.g. systematic reviews). This approach can be helpful in giving you an idea of how much research has already been done on this topic.

You may wish to begin by searching for evidence summaries (e.g. UpToDate) to give you an overview of the entire subject. This can be useful in contributing further to your understanding of the topic and can give you a good idea of how much evidence is likely to be available.

Below are listed resources for different types of evidence and when they might be useful to your search.

4.2 Levels of evidence



Evidence is graded according to how robust it is considered to be. This pyramid diagram illustrates the hierarchy of evidence, ranging from individual opinion at the bottom of the pyramid, up to research methodologies of varying rigour. The higher up the pyramid a methodology is ranked, the more robust and closer to objective truth it is assumed to be.

To read more about levels of evidence, read this Patient UK article on [Different Levels of Evidence](#).

Having some understanding of different levels of evidence and different study types will support you in literature searching [Appendix 4].

4.3 Guidelines

A clinical guideline provides healthcare professionals with a set of recommendations to assist their decisions about the diagnosis and treatment of patients, e.g. [‘Corticosteroids for the treatment of chronic asthma in adults and children aged 12 years and over’](#).

Guidelines can have an international, European, UK or local focus (individual NHS Trusts).

Other related types of evidence include:

- Care pathways - illustrate when and how a patient with a particular condition should be care for. They aim to standardise the care process.
- Standards – specify the appropriate level of care for a patient with a particular condition.
- Protocols – like a guideline, a protocol help to define the minimal acceptable practice for care of a patient, but are more rigid and designed to be followed step-by-step.

It is often worth asking the requester during your initial conversation if they would be interested in identifying the latest guidelines on their subject.

The relevant guidelines on the topic of your search may be useful to the requester if they are trying to identify the accepted measures to follow in the care of a patient or patient group. Guidelines will often provide a useful context for the search topic.

If only part of a guideline is relevant, you may wish to extract that particular section or highlight it in your search report.

However, there may not be guidelines for your search topic (in which case it is worth noting in your search report that no guidelines were identified).

Guidelines will not be useful for searches that require you to find examples of good practice / innovation or newly published evidence.

4.4 Resources for guidelines

Resource	Description	URL
TRIP (Turning Research Into Practice) database	A general search engine for evidence based resources that allows you to filter your results to search for guidelines.	www.tripdatabase.com
National Institute for Health and Clinical Excellence (NICE)	The source of all national guidance on promoting good health and preventing and treating ill health in England and Wales.	www.nice.org.uk
Scottish Intercollegiate Guidelines Network (SIGN)	The source of clinical practice guidelines for the NHS in Scotland.	www.sign.ac.uk
National Guidelines Clearinghouse	A public resource for evidence-based clinical practice guidelines in the United States.	www.guideline.gov
NHS Evidence	Allows you to filter search results to guidelines.	www.evidence.nhs.uk
Google	Search engine (use with caution!). Google can be useful in identifying local guidelines published on NHS Trust websites.	www.google.co.uk
Relevant professional associations or royal colleges	Often the appropriate professional association or royal college will collate specialty-based guidelines on their website.	Various

4.5 Evidence summaries

An evidence summary will provide an overview of a particular clinical topic, e.g. '[Diabetes Mellitus](#)'. It will often include details about how common a condition is, its causes, how it is diagnosed, how it can be treated and related complications. It will also contain references to the evidence that inform the summary, which can be a good way of locating additional evidence based resources, e.g. guidelines or related studies.

An evidence summary is a good way to gain a broader understanding of their topic. It is intended to be used for quick reference so are often useful if you need a quick answer.

However, evidence summaries can be quite general, and for very specific questions you may not find exactly what you are after. If only part of the evidence summary is relevant, you may wish to extract that section or highlight it in your search report.

4.6 Resources for evidence summaries

Resource	Description	URL
UpToDate	<p>American software designed to help clinicians make decisions about patient care. Purchased by the library service. Mainly covers acute medical topics.</p> <p>See http://www.uptodate.com/home/clinicians/toc.html for a list of the specialties covered by UpToDate.</p> <p>UpToDate provides an overview of a topic and so is useful for general search questions, e.g. "Can you find me all the evidence on the diagnosis and treatment of disc herniation?"</p> <p>As a general rule it is worth searching UpToDate routinely for searches on clinical topics. Although there may not be an entire UpToDate summary on your topic, it may be a smaller section of a broader topic. If this is the case, extract the relevant section of the UpToDate summary into your search report and indicate that the whole topic is available if required.</p> <p>The 'What's New' section of UpToDate is useful for 'hot topics' or areas of controversy in different specialties. This is often helpful for doctors who've been asked to present / teach / prepare a Journal Club talk about a current issue in their specialty.</p> <p>Patient information is also available on UpToDate, though it has an American slant. It can be useful for enhancing your understanding of a topic area.</p>	<p>http://nww.wirralhealth.nhs.uk/staff/goto_UpToDate.asp (OpenAthens or UpToDate login required)</p>
Dynamed	Provides summaries of the best evidence in clinical topic areas. Links to British guidance and the British National Formulary (BNF). Includes medical calculators.	https://dynamed.ebscohost.com/user/login (OpenAthens login required)
Patient UK	Patient information website that also produces 'Patient Plus' evidence summaries written for doctors.	www.patient.co.uk

TRIP (Turning Research Into Practice) database	A general search engine for evidence based resources that allows you to filter your results to search for evidence summaries.	www.tripdatabase.com
NICE Surveillance reports	<p>Surveillance reports contain important new evidence relating to NICE guidelines. They contain:</p> <ul style="list-style-type: none"> • a summary of new evidence related to the guideline • an in-depth commentary on a selection of this evidence • a decision on whether the relevant guideline should be updated, with the rationale behind this. 	https://www.nice.org.uk/news/nice-newsletters-and-alerts/subscribe-to-nice-surveillance-report-alerts

Sometimes the library gets free trials to other resources that provide evidence summaries, e.g. BMJ Best Practice.

4.7 Systematic Reviews

A systematic review provides a synthesis of the medical literature on a given topic. A systematic review is considered the highest level of evidence because it uses explicit methods to perform a thorough literature search and critical appraisal of individual studies and then uses appropriate statistical techniques to combine the results of these studies.

To find out more about systematic reviews, read this Bandolier article on '[What is a systematic review?](#)'.

4.8 Resources for systematic reviews

Resource	Description	URL
The Cochrane Database of Systematic Reviews	<p>Systematic reviews produced by the Cochrane Collaboration.</p> <p>Cochrane reviews are considered the highest quality and 'gold standard' of systematic review since they are conducted to the highest standard of methodological quality.</p>	http://www.thecochranelibrary.com
DARE (Database of Abstracts of Reviews of Effects)	<p>DARE includes structured abstracts of systematic reviews from around the world which have been evaluated by the reviewers at the NHS Centre for Reviews and Dissemination (NHS CRD) at the University of York.</p> <p>Reviews that meet minimum quality criteria are included in DARE.</p> <p>These reviews cover topics that have yet to be addressed by a Cochrane review.</p> <p>Can also be searched via the NHS</p>	http://www.thecochranelibrary.com

	Centre for Reviews & Dissemination at http://www.york.ac.uk/inst/crd/ . N.B DARE not updated after April 2015 – records up to end of 2014	
Bibliographic databases (e.g. Medline, Pubmed, CINAHL)	Systematic reviews are also published in journals so can be identified through a databases search; however, these systematic reviews are likely to be of varying quality.	Various

4.9 Primary research

Primary research is published in journals that can be searched via bibliographic databases. Primary research is conducted using a variety of different study types [Appendix 4].

Primary research can complement the search results you've already found to provide a fuller picture of the evidence on a particular topic. Also, the search requester may have explicitly stated that they are looking for journal articles.

The databases that you select for searching will depend on the search question.

4.10 Resources for primary research

Resource	Description	URL
Allied and Complementary Medicine (AMED) 1985 – date	Covers occupational therapy, physiotherapy, rehabilitation, plus alternative medicine: acupuncture, chiropractic, homeopathy, yoga, hypnosis, etc. Indexes over 400 English and European journals.	Hosted on NICE Evidence www.evidence.nhs.uk
British Nursing Index (BNI) 1985 – date	This UK focused database covers A&E, neonatal, cancer, theatres, orthopaedic nursing, etc. Details of articles from over 250 key English language nursing and midwifery journals.	Hosted on NICE Evidence www.evidence.nhs.uk
Cumulative Index of Nursing & Allied Health (CINAHL) 1981 – date	A US database covering all aspects of nursing and allied health. Subjects covered include optometry, radiologic technology, speech and language pathology, nutrition. Contains materials from over 1,200 journals, theses and pamphlets.	Hosted on NICE Evidence www.evidence.nhs.uk
EMBASE 1974 – date	With particular emphasis on European sources, this database covers the whole field of medicine. Drugs, pharmacology and substance abuse are particularly well covered using 5,000 journals about 1,500 not used in Medline.	Hosted on NICE Evidence www.evidence.nhs.uk

Health Business Elite	Health Business Elite provides journal content on all aspects of health care administration and other non-clinical aspects of health care management. It contains full text content from 480+ journals such as H&HN: Hospitals & Health Networks, Harvard Business Review (available back to 1922), Health Facilities Management and many more.	Hosted on NICE Evidence www.evidence.nhs.uk
HMIC 1979 – date	Comprises DH Data and Kings Fund databases, both covering UK NHS health services management, policy & standards and social care. DH Data includes planning - financial, building and equipment; public health; toxicity studies. DH Data records are mainly from 1983 onwards, although departmental materials dates back to 1919. Kings Fund's focus is on improvements in health and health care, covering health inequalities, partnership working and workforce development (1979 to date).	Hosted on NICE Evidence www.evidence.nhs.uk
MEDLINE 1950 – date	This is a large US database of medical information. Other subjects covered include dentistry, veterinary medicine, medical psychology, genetics and advanced nursing practice. The database covers over 5,000 journals from 70 countries.	Hosted on NICE Evidence www.evidence.nhs.uk
ProQuest Hospital Collection	ProQuest Hospital Collection is comprised of 5 health databases including: ProQuest Health and Medical Complete, ProQuest Nursing & Allied Health Source, ProQuest Health Management, ProQuest Psychology Journals and ProQuest Family Health	Hosted on NICE Evidence www.evidence.nhs.uk
PsycINFO 1887 – date (1887 date for Journals. Note: other texts date from 1806)	Subjects covered relate to clinical, social and biological areas of psychology. These include addiction, pharmacology, anthropology and law. Published by the American Psychological Association, material is included from 2,000 international periodicals.	Hosted on NICE Evidence www.evidence.nhs.uk
Pubmed	<p>PubMed is the National Library of Medicine's medical database, and covers the fields of medicine, dentistry, the health care system, and preclinical sciences.</p> <p>PubMed is the free version of Medline, but basic citations are often included on PubMed before being indexed on Medline, and so PubMed can be more up-to-date than Medline.</p> <p>When searching Pubmed articles that you can</p>	www.pubmed.gov

	access with your Athens account will not be displayed, whereas via NHS Evidence you can follow full text links where available.	
NHS Economic Evaluations Database (EED)	<p>Focuses primarily on the economic evaluation of health care interventions. Useful when there is a 'cost effectiveness' element to your search question.</p> <p>Economic evaluations are studies in which a comparison of two or more interventions or care alternatives is undertaken and in which both the costs and outcomes of the alternatives are examined. This includes cost-benefit analyses, cost-utility analyses, and cost-effectiveness analyses.</p> <p>N.B. NHSEED not updated after April 2015 – records up to end of 2014</p>	<p>Via the Centre for Reviews and Dissemination (http://www.york.ac.uk/inst/crd/) or via The Cochrane Library (www.thecochranelibrary.com).</p>
Health Technology Assessments (HTA) database	<p>The focus of the HTA database is on completed and ongoing health technology assessments from around the world.</p> <p>The term 'health technology' covers a range of methods used in healthcare including drugs, devices, procedures, care settings and screening.</p>	<p>Via the Centre for Reviews and Dissemination (http://www.york.ac.uk/inst/crd/) or via The Cochrane Library (www.thecochranelibrary.com).</p>
Cochrane Central Register of Controlled Trials (CENTRAL)	<p>Contains a register of studies which may be relevant for inclusion in Cochrane reviews.</p> <p>CENTRAL is the world's largest database of randomly controlled trials.</p>	<p>Via The Cochrane Library www.thecochranelibrary.com</p>
Cochrane Methodology Register	<p>A bibliography of publications which report on methods used in the conduct of controlled trials. It includes journal articles, books and conference proceedings; these articles are taken from the MEDLINE database and from hand searches.</p> <p>Primarily of use to health care researchers.</p>	<p>Via The Cochrane Library www.thecochranelibrary.com</p>

4.11 Reports & other publications

Reports and other 'grey literature' publications are not always included in any of the sources above. They can be useful in providing additional context to your search.

Examples may include:

- Government reports and initiatives, e.g. Department of Health publications
- Position statements and reports produced by health-related organisations, e.g. Royal College of Nursing
- Case studies, newsletters, examples of good practice and innovation

- Technical reports, working papers, committee reports or white papers

4.12 Resources for reports & other publications

Resource	Description	URL
NICE Evidence	Gateway to quality assessed evidence based information for NHS staff, students and the public. Allows you to filter search results to identify grey literature and other types of information.	www.evidence.nhs.uk
TRIP (Turning Research Into Practice) database	A general search engine for evidence based resources.	www.tripdatabase.com
Google	Use with caution! The Advanced Search feature is useful in identifying examples of good practice and case studies from other NHS Trusts (limit search results to the nhs.uk domain).	www.google.co.uk

4.13 Health management questions

Search topics won't always be clinical questions; you may be asked to find evidence on a health management, corporate or business subject, such as human resources, service delivery or finance.

Some of the resource outlined above will contain some elements of health management. You may also want to try the following resources.

4.14 Resources for health management questions

Resource	Description	URL
Health Business Elite	Health Business Elite provides journal content on all aspects of health care administration and other non-clinical aspects of health care management. It contains full text content from 480+ journals such as H&HN: Hospitals & Health Networks, Harvard Business Review (available	Hosted on NICE Evidence www.evidence.nhs.uk

	back to 1922), Health Facilities Management and many more.	
HMIC 1979 – date	Comprises DH Data and Kings Fund databases, both covering UK NHS health services management, policy & standards and social care. DH Data includes planning - financial, building and equipment; public health; toxicity studies. DH Data records are mainly from 1983 onwards, although a departmental material dates back to 1919. Kings Fund's focus is on improvements in health and health care, covering health inequalities, partnership working and workforce development (1979 to date).	Hosted on NICE Evidence www.evidence.nhs.uk
NICE Evidence	Gateway to quality assessed evidence based information for NHS staff, students and the public.	http://www.evidence.nhs.uk
Intute Business and Management	Provides free access to high quality resources on the internet. Each resource has been evaluated and categorised by subject specialists based at UK universities.	http://www.intute.ac.uk/business/
NHS Economic Evaluations Database (EED)	<p>Focuses primarily on the economic evaluation of health care interventions. Useful when there is a 'cost effectiveness' element to your search question.</p> <p>Economic evaluations are studies in which a comparison of two or more interventions or care alternatives is undertaken and in which both the costs and outcomes of the alternatives are examined. This includes cost-benefit</p>	Via the Centre for Reviews and Dissemination (http://www.york.ac.uk/inst/crd/) or via The Cochrane Library (www.thecochranelibrary.com).

	<p>analyses, cost-utility analyses, and cost-effectiveness analyses.</p> <p>N.B NHS EED not updated after April 2015 – records up to end of 2014</p>	
Business and Health Management wiki	<p>Wiki created and managed by the LIHNN Clinical Librarians Group.</p> <p>A useful collection of key resources to help you answer business and health management questions.</p>	Available via the LIHNN wikispace.
Health Management Online	A selection of resources from NHS Scotland Health Management Library and Information Service, designed to support health care managers.	http://www.healthmanagementonline.scot.nhs.uk
Commissioning Handbook for Librarians	The handbook includes tips on how to locate the best available evidence for commissioners including search terms and also examples of searches done & their impact. Although aimed at librarians supporting commissioning staff, the resources and advice is useful for general health management questions.	http://commissioning.pbworks.com

4.15 Health statistics questions

A search may require statistics; for example, if the search is about disease occurrence, epidemiology, hospital admissions or demographics.

4.16 Resources for health statistic questions

Resource	Description	URL
Web Center for Social Research Methods	Resources for people involved in applied social research and evaluation. Includes resources on applied social research methods, including 'Knowledge Base', an online textbook that covers defining a	http://www.socialresearchmethods.net/

	research question, sampling, measurement, research design and data analysis. Also includes an online statistical advisor tool and a concept mapping tool.	
Hospital Episode Statistics (HESonline)	HES is the national statistical data warehouse for England of the care provided by NHS hospitals and for NHS hospital patients treated elsewhere. HES is the data source for a wide range of healthcare analysis for the NHS, government and many other organisations and individuals.	http://www.hesonline.nhs.uk/Ease/servlet/ContentServer?siteID=1937
UK National Statistics	National Statistics webpage contains sections on "release calendar," statistics producers, browse by theme and regional statistics. The Neighbourhood Statistics sub-site www.neighbourhood.statistics.gov.uk is a good starting point for local information	http://www.statistics.gov.uk/hub/index.html
Infoplease	Infoplease contains the following sections: atlas, encyclopedia, thesaurus, features, quizzes and timelines	http://www.infoplease.com/
The NHS Information Centre	We are England's central, authoritative source of health and social care information. Acting as a hub for high quality, national, comparative data for secondary uses, we deliver information for local decision makers to improve the quality and efficiency of frontline care.	http://www.ic.nhs.uk/
Compendium of Clinical and Health Indicators (NCHOD)	The Compendium of Clinical and Health Indicators contains a comprehensive range of over 150 comparative health indicators for CCGs, Primary Care Trusts and local authorities.	Data is available to anyone on our unrestricted public site http://indicators.ic.nhs.uk Restricted Compendium data is only available to NHS users through an N3 connection on http://nww.indicators.ic.nhs.uk .
Health-EU	The Public Health Portal of the European Union. A major objective of the EU Public Health strategy is to produce comparable information on health and health systems in the EU.	http://ec.europa.eu/health-eu/health_in_the_eu/statistics/index_en.htm

4.17 Resource checklist for non-clinical ad-hoc searches

Developed by Guidance Information Services at NICE. This checklist is intended to help with finding relevant resources to support non-clinical ad-hoc searches. In addition to the sources below, standard clinical sources such as MEDLINE, Embase and a NICE Evidence search should also be considered for the search.

- HR and Management

\\Aph-nf8\san2\Groups\Education Centre\Library\NEW_S_DRIVE_11_08\SERVICES\Literature Searching Service\Literature search protocol\HR and Management Resources.doc

- Information Management and Retrieval

\\Aph-nf8\san2\Groups\Education Centre\Library\NEW_S_DRIVE_11_08\SERVICES\Literature Searching Service\Literature search protocol\Information Management and Retrieval Resources.doc

- Marketing & Communication

\\Aph-nf8\san2\Groups\Education Centre\Library\NEW_S_DRIVE_11_08\SERVICES\Literature Searching Service\Literature search protocol\Marketing and Communication Resources.doc

- User Research Resources

\\Aph-nf8\san2\Groups\Education Centre\Library\NEW_S_DRIVE_11_08\SERVICES\Literature Searching Service\Literature search protocol\User Research Resources.doc

4.18 Additional resources

Although not considered 'core' resources, there are some others which may be useful if your search so far has not yielded many results.

Resource	Description	URL
Social Care Online	Social care resources.	http://www.scie-socialcareonline.org.uk/
National Electronic Library of Medicines	Pharmacy resources; useful for any search topics that are medicines related.	http://www.nelm.nhs.uk/en/
UK Medicines Information	Pharmacy resources; useful for any search topics that are medicines related.	http://www.ukmi.nhs.uk/
National Prescribing Centre	Pharmacy resources; useful for any search topics that are medicines related.	http://www.npc.co.uk/
Current Controlled Trials	Database of controlled trials currently underway in the UK; useful for searches where the requester may be after unpublished studies (e.g. if they are undertaking a systematic review).	http://www.controlled-trials.com/
PEDro (Physiotherapy Evidence Database)	Physiotherapy resources – published studies and clinical pathways.	http://www.pedro.org.au/
DUETS (Database of Uncertainties about the Effects of Treatments)	Database of topics in which there is very little (or no) evidence. Useful in confirming that there is very little evidence in a certain research area.	http://www.library.nhs.uk/duets/

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5 Search results

5.1 Literature search documentation

Standard documentation is used for literature searching (adapted from a template produced by the LIHNN Clinical Librarians Group). The documentation includes:

- Part A: Literature search request form (a print version is available, though the preferred method of submitting searches is via the online request form at http://www.whnt.nhs.uk/hrod/development/library_services/services/lssappform.aspx).
- Part B: Literature search report template (this is the report that gets sent back to the requester).
- Part C: Literature search digest template (this template was designed for occasions when a critical appraisal of the evidence is also required as part of the search; we don't tend to use this part of the documentation).

All literature searching documentation is available on the S drive at S:\Groups\Education Centre\Library\O_NEW_S_DRIVE_NOV_2008\SERVICES\Literature Searching Service\Literature Search documentation. Accompanying guidance is also provided.

5.2 Presenting results

Use the literature search report template (Part B) to present your search results.

It's good practice to collate your results as you go along. Save a new version of the template in the folder assigned to your search on the S drive, e.g. 'LS11033 Dr Example'. You can then add new results as you find them and your progress so far will be recorded and stored on the S drive (useful in case someone else needs to take over the search from you due to sickness).

Refer to the documentation guidance for help with completing each section of the report template. The 'Results' section is where you will collate and present your search results to the requester.

For each result, include the following (where appropriate):

Title: *Full title of result*

Type of information: *e.g. systematic review, report, clinical evidence summary*

Source: *e.g. UpToDate, NHS England, Cochrane Library*

Date:

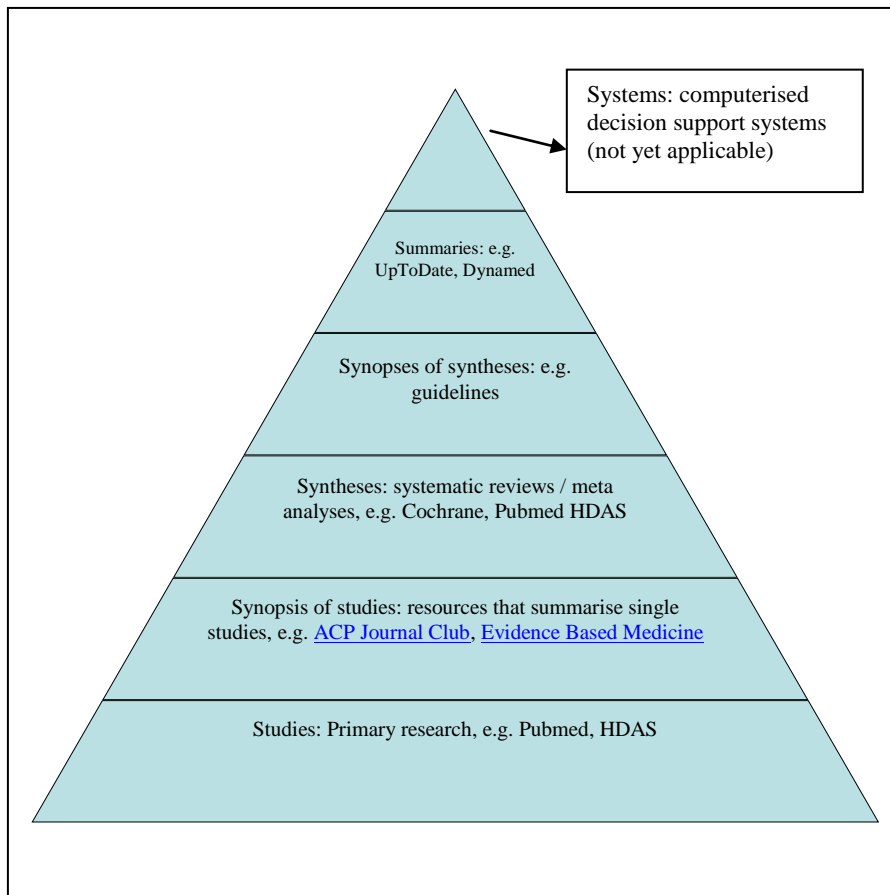
Description: *Key points / highlights of the item*

Available online at: *Insert hyperlink*

NB: To avoid repetition, for HDAS/Pubmed results just include the information above once as a blanket statement for all results.

Layout

Please arrange results with more robust evidence at the top of the report, according to the '6S' hierarchy, as follows:



More detailed guidance on using the 6'S' model to answer clinical questions is available [here](#).

Where you have found relevant information in part of a larger document (for example, a particular section of a guideline), make sure you signpost the relevant section. You may want to extract the relevant section and insert the text in your report.

For reports, guidelines and other web-based resources, always provide a URL to the original source so that the requester can easily locate it if required.

5.3 Annotating results

It is often helpful to annotate your results where appropriate. The comments box provides a good opportunity for you to describe the following:

- Your general impressions of the evidence that is available (e.g. 'I was not able to find a huge amount of evidence on this topic...')
- Your search strategy and which resources you searched (e.g. 'A search of Medline was conducted to identify any related journal articles...')
- How you have organised the results below (e.g. 'I have arranged the results below by type of evidence in date order...')
- Quote any key evidence, e.g. ('The most recent guidelines on the topic state that...')
- Any decisions you made during the search process (e.g. 'As there was a large number of results I restricted the search to evidence published in the last 10 years...')
- Any other information you feel it would be useful to explain

If you're not sure how to annotate your results, think about how you might feed back your search results if you had to do so verbally.

5.4 Sending search results back to the requester

Once your search report has been completed, you can email the search results to the requester. There is a template email for this purpose, also on the S drive at S:\Groups\Education Centre\Library\0_NEW_S_DRIVE_NOV_2008\SERVICES\Literature Searching Service\Literature Search documentation.

5.5 Critical appraisal of results

Some library services offer critical appraisal of search results as an additional service; this is not something we offer routinely although you can still signpost critical appraisal resources if you are asked.

You may wish to refer to *Library Helpsheet 14: Resources for critical appraisal*.

6 Literature search evaluation

An email is sent to the search requester approximately 6 weeks after they have received literature search results.

A six week time period was considered adequate for the requester to have read and used the evidence provided in the literature search report. A note of when to contact each requester is recorded on the Activity Tracker.

Administration of the evaluation questionnaires is completed by a Library Assistant; the procedure is on the S drive at S:\Groups\Education Centre\Library\0_NEW_S_DRIVE_NOV_2008\OPERATIONS\Procedure Manual\New Procedures\Literature searches.

An email template is available on the S drive for sending out the evaluation questionnaire. The questionnaire is an online questionnaire created using Survey Monkey. To alter the questionnaire or retrieve any evaluation data contact the WHIS Internet team (Wih-tr.content@nhs.net).

Evaluation data is often useful if we're asked to prepare a report for senior management, to demonstrate the value of our service or to use as promotional material.

7 Additional resources

You may find the following resources useful in supporting you in the literature searching process.

7.1 Other literature searching protocols

Examples of literature searching protocols used by other librarians are available on the S drive at S:\Groups\Education Centre\Library\0_NEW_S_DRIVE_NOV_2008\SERVICES\Literature Searching Service\Literature searching tools\Examples of literature searching protocols.

7.2 Resources for critical appraisal

Refer to *Library Helpsheet 14: Resources for Critical Appraisal*.

7.3 Training materials & user guides

All our in-house training materials are available on the S drive at S:\Groups\Education Centre\Library\0_NEW_S_DRIVE_NOV_2008\SERVICES\End User Training. These materials are also available to our users via the library website at

http://www.whnt.nhs.uk/hrod/development/library_services/training_and_induction/Online_training_sessions.html.

Other health libraries produce their own user guides which are often useful to read, for example, Health Libraries in Lincolnshire Online (HELLO) at http://www.hello.nhs.uk/training_quickguides.asp and University Hospitals of Leicester NHS Trust at <http://www.uhl-library.nhs.uk/training.html>.

Pubmed *Fact Sheet*: Medical Subject Headings (MeSH®)

<http://www.nlm.nih.gov/pubs/factsheets/mesh.html>

How to conduct an effective and valid literature search (2007) Harvard, L Nursing Times

<http://www.nursingtimes.net/nursing-practice-clinical-research/how-to-conduct-an-effective-and-valid-literature-search/217252.article>

7.4 Discussion lists

LIHNN Clinical Librarians Group mailing list

Subscribe at <http://lists.lihnn.nhs.uk/cgi-bin/mailman/listinfo/clinlibrarians>.

CLIN-LIB (national discussion list for UK Clinical Librarians)

Subscribe at <https://www.jiscmail.ac.uk/cgi-bin/webadmin?A0=clin-lib>

7.5 Ask a colleague

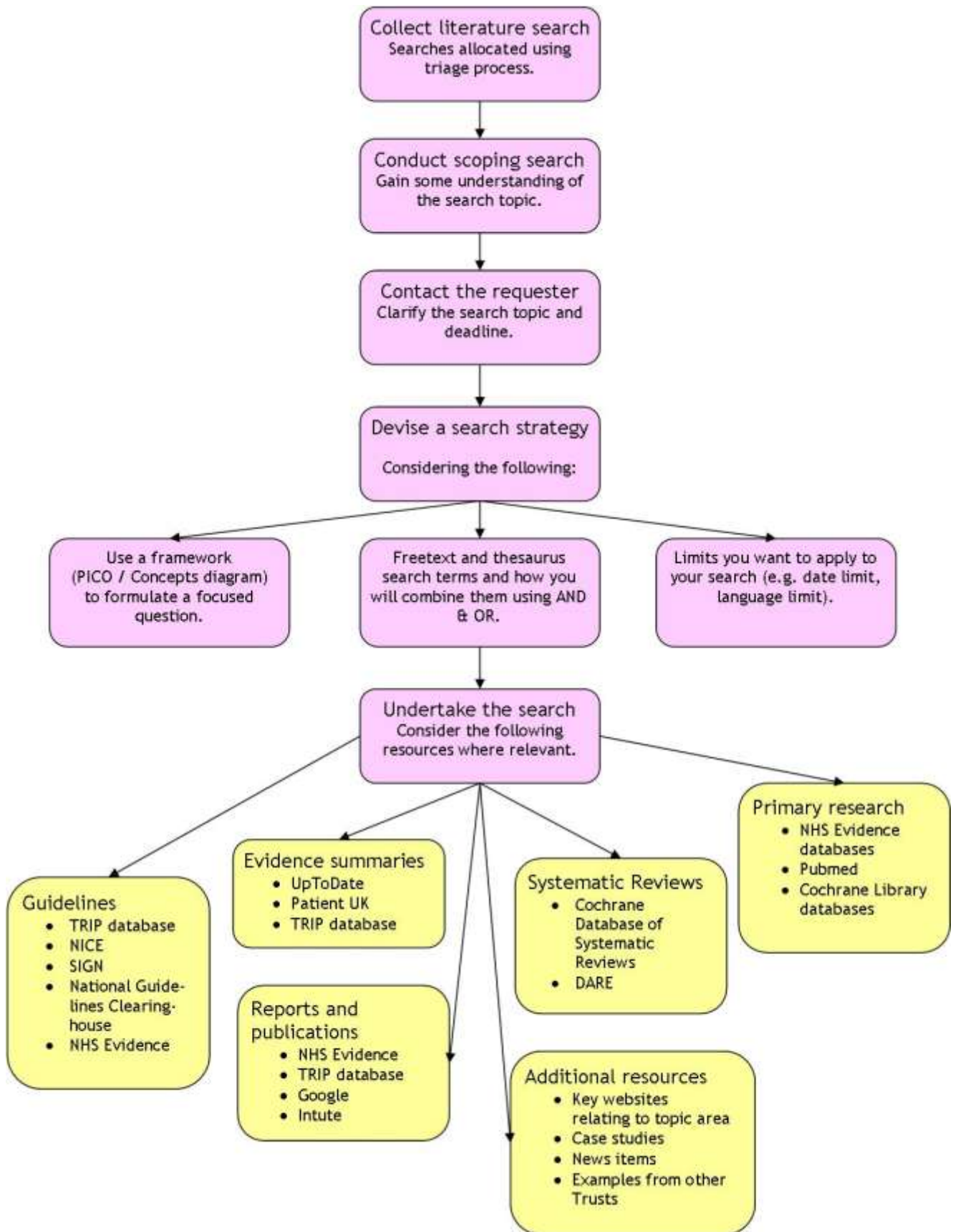
The LIHNN Clinical Librarians Group is a brilliant source of support for literature searching. In 2009 the group began a piece of work called FISH (Finding Information to Support Healthcare), which aimed to provide peer support to health librarians involved in literature searching. The work of this project is available on the FISH wiki at

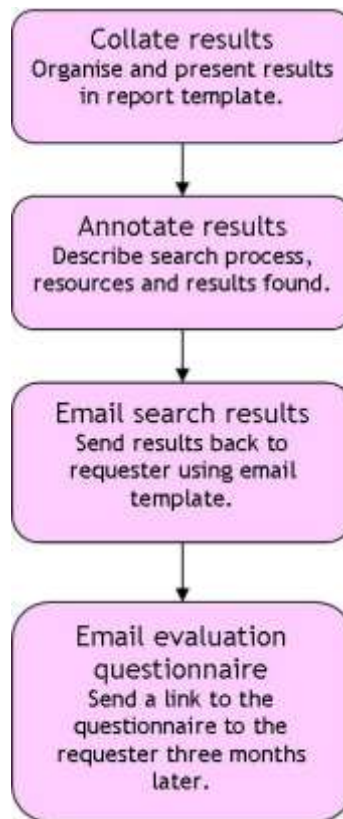
<http://fishnw.pbworks.com>.

Locally we ran our own peer support workshops in 2010, details of which are shared on the FISH wiki and also on the S drive at S:\Groups\Education Centre\Library\0_NEW_S_DRIVE_NOV_2008\SERVICES\Literature Searching Service\Lit searching peer support.

It is always worth discussing any difficulties you encounter in searching with a colleague who may be able to offer suggestions or coach you towards a way forward.

Appendix 1: Flowchart of search process





Appendix 2: PICO framework

PICO

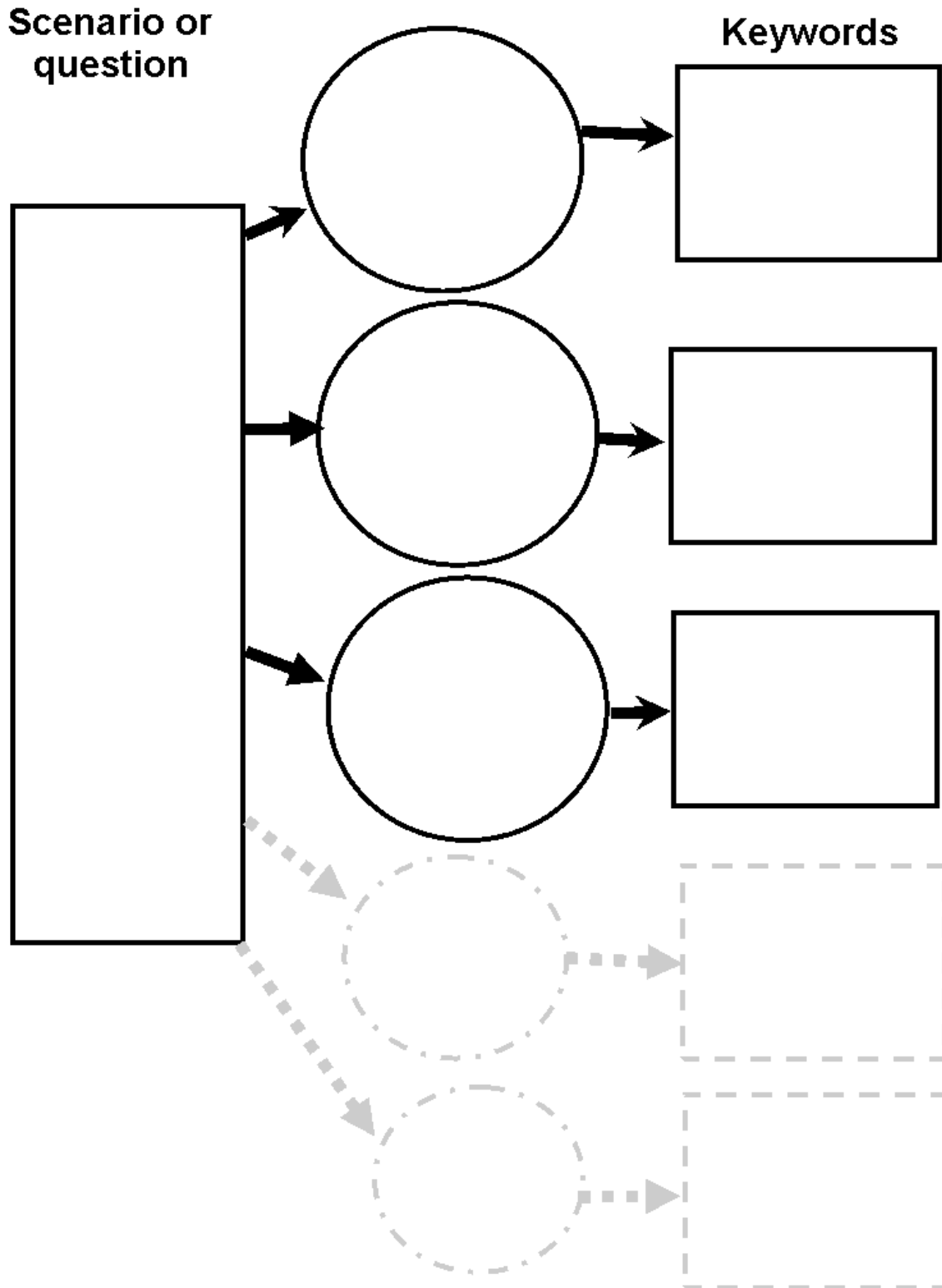
A framework for formulating
a focused, answerable clinical question

	PICO element	Your search terms Think about alternative terms, spelling variations, technical terms etc.
P	Patient / problem How would you describe the person / people in the clinical scenario? E.g. By sex, age, race, condition, care setting, socioeconomic setting.	
I	Intervention What is the intervention? E.g. type of therapy, treatment, cause prevention, system of support, new service.	
C	Comparison The comparison could be an alternative treatment or placebo, different setting, dosage or frequency. There may not be a comparison.	
O	Outcome What is aiming to be achieved by the scenario? E.g. survival rate, quality of life, reduction of event, reduction of symptoms, client safety or independence.	

My question is...

Appendix 3: Concepts framework

Concepts Worksheet



Appendix 4: Different study types

Study Design	Definition	Key Features
Systematic review / meta-analysis	Comprehensive identification and synthesis of all the literature on a given topic	Evidence is sought in a systematic, explicit way. Results from different studies may be combined using statistical analysis.
Randomised Controlled Trial (RCT)	Used when 2 or more interventions are compared	Randomisation. Blinding. Focus is on the effectiveness of the intervention.
Cohort Study	Where patients are followed over a period of time to see what happens to them	Prospective
Case-control	When you want to know why a particular group of patients is different	A group with a defining characteristic is identified. These are compared with a control group without the characteristic. The control group may be matched by age, sex etc. Retrospective.
Case report	Detailed report on the profile of a single patient	Often used to report rare events.
Case series	A report on a series of patients with an outcome of interest	Individual reports covering patients with similar conditions.
Survey	What is happening now	A sample is selected from which inferences are drawn on the whole population.
Qualitative	Where the intention is not just to measure but to explain	Studied in a natural setting, attempting to make sense of or interpret phenomena.

Acknowledgement: University Hospitals of Morecambe Bay NHS Foundation Trust