

London Kent Surrey Sussex Regional Searching Protocol

draft

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Introduction

At [EAHIL 2018](#) Dr Andrew Booth's presentation "[How many search results are enough...and what can we do about it?](#)" reported wide variation in practices and the time taken to perform mediated literature searches across [by?] healthcare libraries and knowledge services. To address this disparity, to help ensure the uniformity and quality of searches, and to spread best practice, in October 2018 the London and Kent, Surrey and Sussex Health Education England's (HEE) Library and Knowledge Services Development Lead requested the Chairs of the Kent Surrey Sussex Searching and Training Forum (KSS STF), Tom Roper, and the London Searching and Training Forum (LSTF), Adam Tocock, to form a working group to create a recommended searching protocol for professional staff in the region.

The working group was comprised of volunteers from KSS STF and LSTF, listed below, who met in January 2019 to set their terms of reference and begin planning this protocol document. As a starting point, to harness the expertise already available across the sector, a search for existing regional/local/institutional protocols was performed, and requests for existing protocols were sent to national professional discussion lists (including the LIS-MEDICAL, CLIN-LIB, and LIS-LINK Jiscmail threads). The group would like to thank all those who contributed.

Over a series of meetings the information from these protocols was combined with the knowledge and experience of group members to form the basis for the contents of the protocol.

The following design decisions were made:

- To structure the protocol by the domains used within OpenAthens and latterly KnowledgeShare (with slight modification and addition), as this declension is already familiar to library services.
 - The domain of "Patient Information" was further subdivided into a) "Questions from a Patient", and b) "Creating Information Resources for Patients", as the latter practice is becoming more common among library services. A Quality Improvement (QI) domain was added owing to the recent surge in popularity of this specific type of search.
- To divide each domain entry into 3 steps: Planning, Execution and Results - with an added resources section at the end of each entry.
- To include a "maximum time to spend on this search" using as a basis for this the recommended timeframes in North East London Foundation Trust's (NELFT's) local searching protocol for staff, authored by Lisa Burscheidt, and also the group's own experience.
- To include a "suggested level of experience" again based on the group's experience, using the following scale: novice (1), intermediate (2), proficient (3), advanced (4), expert (5).
- To support novice searchers with a general "For ALL Literature Searches" entry and a "Troubleshooting..." appendix, intended to help users struggling to find anything, or finding too much.
- To finish with a "Resources" appendix, which collates all the resources covered in all the entries.

The protocol has gone through a series of reviews firstly by KSS STF and LSTF members, to colleagues that had expressed an interest in the project, and to new professionals starting in their workplaces (as

identified by requests at KSS STF and LSTF meetings, and via requests to the national discussion lists, and the CILIP New Professionals group)

The working group formally introduced a draft to colleagues at HEE's *London, Kent, Surrey and Sussex Library Knowledge Services Forum 2019* at Stewart House, Russell Square, on November 14th 2019 and after a period of consultation and re-editing the protocol was made available to all colleagues via the [KSS STF Wiki](#) [and upcoming LKSS website] as a pdf file at the end of 2019, with its publication announced via national discussion lists etc.

It will be maintained and reviewed annually by the working group, as per other protocols considered in its composition, in consultation with its users and the aforementioned stakeholders. The working group welcomes all feedback and suggestions, please contact adam.tocock@nhs.net.

Next review date: December 2020.

The Group acknowledge that searching is a professional skill and this protocol does not replace an expert searcher: it is intended for professional staff to refer to in an advisory capacity when performing a mediated literature search, and users override their own institutional/local practice at their own discretion.

This document was created by the Regional Search Protocol Working Group, comprised of: Cecilia Bethencourt-Dunning, Lisa Burscheidt, Helen Elwell, Mark Kerr, Louise Levitt, Alison McClaren, Alison Millis, Tom Roper, Katherine Scott, Heather Tang, and Adam Tocock.

They are grateful for the contributions of Emma Ramstead, Holly Case-Wyatt and Igor Brbre.

Adam Tocock
14/8/19

Terminology

Throughout this document the following preferred terms are used, following consensus from the working group:

- "Literature search" is used instead of "evidence search".
- "HDAS databases" is used to refer to the healthcare databases available via NICE and HEE's Healthcare Database Advanced Search (HDAS) interface: AMED, BNI, CINAHL, EMBASE, EMCARE, HMIC, Medline, PsycINFO (and PubMed, with limited search functionality).
- "Scoping Search" is used instead of "pilot search", or "quick and dirty search".
- "Point of care tool" is used instead of "Clinical Decision Support tool" or "Clinical reference tool".
- "High tier evidence sources" is used instead of "secondary evidence sources".

For ALL Literature Searches

Please go through this entry before referring to the specific entry relevant to your search. Where there is a discrepancy between the advice given in this general section and the specific entry's advice, please follow the specific entry.

Planning

- However you receive the request for a search - in-person, over the phone or via email – check you have enough information before you begin:
 - Do you understand the question enough, or what is being sought?
 - Are the parameters and limits of the search clear? Do you have a date-range or specific patient population to search within? What does your requestor NOT want?
 - What is your deadline?
 - Elicit key terms and synonyms from the requestor.
 - Establish if there are any good papers your requestor already knows about, to guide and inform your search. If your requestor provides useful papers they have already found, have a look at the way they are indexed and check what synonyms etc. they use that you could introduce to your search strategy, and a prospective citation search could uncover useful papers.
 - Does your requestor have an idea of how many results they would expect you to find? How many would they like to receive?
 - Do you know what format(s) the requestor would like to receive results in?
 - Would they like a list of titles/abstracts with hyperlinks to the full text in an email?
 - Would they prefer results as a report in a Word document (that they can then edit)?
 - As a pdf (that they will not be able to edit)?
 - In .ris file format so that results can be loaded into reference management software
 - They may want their results in several formats.
 - Some LKSs will use local templates, or provide search reports from KnowledgeShare, in which case some of these questions may be superfluous

If you think you will need further clarification on any aspect, contact the requestor before you start. It can be good to establish a dialogue.

- Record in KnowledgeShare, or within your local system, that YOU are undertaking the search.
- Check KnowledgeShare, or your local repository of literature searches, to see if there has been an identical or similar search for your topic previously. If an identical search was conducted recently, can you send the results straight to the requestor, or rerun the search? If a similar search was conducted a while ago, can you utilise the strategy for your current task?

- Try to identify the sources you will use before you start searching; agree these with the requestor if you can.

Execution

- Do not be afraid to contact the requestor with any queries that may arise when you are searching.
- Be sure to keep a record of the search strategies you use.
- Try a quick scoping search to get a sense of what is out there, to help find keywords and potentially useful literature. If you are searching using HDAS: try searching all databases by title field only, entering your key search terms – this should retrieve only relevant articles that will be indexed with useful terms you can use in your search strategy, as well as variant terms, synonyms etc.
- Take a top-down approach to searching the literature, unless advised otherwise within this document, looking for secondary/high tier evidence (like reviews in The Cochrane Library) before seeking primary research (in Medline and other databases). If you can find a recent Cochrane review on your topic this may preclude searching for primary research yourself.
- Formulate a search strategy, using PICO or another framework if appropriate, to identify the key concepts in the search:
 - For each key concept, find relevant thesaurus terms/subject headings/controlled language terms (including floating subject headings) using your scoping search findings and the “map to thesaurus” function in database interfaces.

Find natural language terms, including rough/exact synonyms and variant terms. Consider differences in US and UK English spellings, consider using truncation, adjacency commands, and phrase-searching.

- Use Boolean operators (AND/OR) in your strategy:
 - Use OR operator to combine synonymous natural or controlled language terms/searches to ensure the sensitivity of your search, increase your yield and ensure you are not missing any relevant results.
 - Use the AND operator to combine the separate concepts in your search, to decrease your yield, increase the specificity of your search and ensure you are returning only results relevant to you.
- Adopt a sensitive/broad/inclusive approach to the search, at least initially; you do not want to miss anything important. You can adjust the specificity/sensitivity as you go.
- Screen results for relevance, “sense checking” as you go to see if what you are retrieving is in the right area. Iterate your search strategy if necessary.
- Adapt your strategy for other databases and sources.
- Add limits to your search as agreed with the requestor – but consider if limits by date and other parameters etc. are justifiable.

- Try a prospective citation search of key articles that you have found or that your requestor has provided by searching for them by title in a citation index like Web of Knowledge. You can also search for them by title in PubMed and Google Scholar, checking their “cited by” entries, though neither of these methods is 100% comprehensive.

Citation searching can help you uncover papers that you may otherwise have missed. It is also a test of the rigour of your search: if your search strategy is robust you should retrieve all the papers that the key articles have been cited by. If you have not, consider why not and go back to the drawing board if required.

For more help with formulating search strategies, please see:

- “Appendix 1: Resources -- HDAS Databases”.
- “Appendix 2: Troubleshooting / FAQs / Tips and Tricks”.
- Thames Valley, Wessex and South West healthcare librarians’ guidance *The Literature Search Process: Guidance for NHS Researchers. Version 7.0 January 2019*: https://kfh.libraryservices.nhs.uk/wp-content/uploads/2019/01/Lit_search_protocols_protocols_2019.pdf

Results

- Present your search results to the requester in the agreed format(s) and within the agreed deadline. Do not be afraid to negotiate an extension if one is required.
- Use, or create, templates for your reports and communications with the requestor, to save yourself time and ensure consistency. KnowledgeShare does this automatically.
- **Use your service’s branding etc., and signpost other library services wherever possible in all your communications with the requestor.**
- Collate, deduplicate, and evaluate your results. If time allows screen them by title/abstract and delete the irrelevant ones. Err on the side of caution and if you are unsure of the relevance of a result, do not delete.
- Identify key results you have retrieved (i.e., highlight review articles or guidelines, or point out historically significant papers).
- If you are producing a report, rather than sending only deduplicated results, compile your results with abstracts and full text links wherever possible (instructing the requestor how to access the full text via NHS OpenAthens). HDAS’s Word and pdf exports, and KnowledgeShare reports, automatically produce a table of contents (titles only list) at the start of the document, and include full text links.
 - Can you create a summary and/or synthesis of findings and present this at the front of your report, time-permitting?
 - In your report, present synopses from point-of-care tools or other sources and international/national guidelines front-and-centre, followed by other high tier/secondary evidence,

with lower-tier/primary research evidence following, arranged in reverse-chronological order [a typical KnowledgeShare report format].

- Describe your searching methodology in your report, or along with your results, and include your search strategies in full.
- Include a disclaimer with your results. KnowledgeShare automatically includes the following in its reports:

“We hope that you find the evidence search service useful. Whilst care has been taken in the selection of the materials included in this evidence search, the Library and Knowledge Service is not responsible for the content or the accuracy of the enclosed research information. Accordingly, whilst every endeavour has been undertaken to execute a comprehensive search of the literature, the Library and Knowledge Service is not and will not be held responsible or liable for any omissions to pertinent research information not included as part of the results of the enclosed evidence search. Requestors are welcome to discuss the evidence search findings with the librarian responsible for executing the search. We welcome suggestions on additional search strategies / use of other information resources for further exploration. You must not use the results of this search for commercial purposes. Any usage or reproduction of the search output should acknowledge the Library and Knowledge Service that produced it.”

- Include a copyright/acknowledgement notice. KnowledgeShare automatically includes the following in its reports:

“Please acknowledge this work in any resulting paper or presentation as: Evidence search: “[evidence search title]”. [Your name]]. (Date of search). [Your city, your country]: [Your library’s name].”

- Record on KnowledgeShare, or within your local system, that you have completed the search.
- Add the report you produced, or the results you sent to the user, on to KnowledgeShare or your local system, so other users can retrieve them.
- **Systematically request, and record, feedback or evaluation from the requestor.**

Literature Searching for Audit

Suggested level of experience required for this search: Proficient (3).

Suggested maximum time to spend on this search: 3-4 hours.

Please read “For ALL Literature Searches” before proceeding.

Planning

- Establish what service is being audited from your requestor; are there specific setting(s) and population(s), any (non-arbitrary) date range to search within, any geographic or language limits etc.? Would they like to know what other NHS and non-NHS organisations are doing?
- Be prepared that there may be a tight deadline to meet.

Execution

- Search high tier evidence sources: the Cochrane Library, NICE Evidence and the Trip Database. Keep an eye out for standards and guidance from these sources but do not limit your search to JUST these things.
- Search point-of-care tools (BMJ Best Practice/Clinical Key/Dynamed/UpToDate) for entries on the requestor’s topic, if accessible.
- Search your library discovery tool, if available.
- Search the library catalogue for recent books and ebooks on the search subject (or in the general area of the requestor’s more specific subject). Consider searching for information on conducting audits more generally if you feel that the requestor might appreciate this “added value content”.
- Perform a thorough search of all appropriate HDAS databases.
- To retrieve reports on other Trusts’ advances/activities, perform an advanced Google search for the topic with “NHS” in your terms, and/or your country specified as UK, and/or limiting the search to sites ending with “...nhs.uk” URLs. Search within the NHS Improvement website also.

Results

- Present the deduplicated results in an easy-to-digest and easy-to-share report, with a summary/synopsis first of all (if possible), high tier/secondary evidence front and centre, and lower-tier/primary research evidence arranged in reverse-chronological order afterwards (a typical KnowledgeShare report format).

Resources

- High tier evidence sources: the Cochrane Library, The University of York's Centre for Reviews and Dissemination (CRD), NICE Evidence, the Trip Database, and the Campbell Collaboration.
- Point-of-care tools: BMJ Best Practice/Clinical Key/Dynamed/UpToDate.
- Library discovery tool.
- Library catalogue.
- HDAS databases: AMED, BNI, CINAHL, EMBASE, EMCARE, HMIC, Medline, PsycINFO, PubMed.
- NHS Improvement.
- Google.

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Literature Searching for a Business Case

Suggested level of experience required: Expert (5).

Suggested maximum time to spend on this search: 3 hours.

Please read “For ALL Literature Searches” before proceeding.

Planning

- Confirm the aims of the business case with the requestor and ask if they know of any existing information that can set precedent.
- Familiarise yourself with company standards for business cases, e.g. is there a specific template to follow or information that must be included?
- Get a clear understanding of the topic from the requestor and know what exactly they want the business case to focus on. For instance, examples of cost saving, number needed to treat, time saved etc.
- Ask requestor to give you more information on the background of the search. E.g. what are the current practices in place? Evidence for these practices could be compared and contrasted.

Execution

- The focus should be on the highest levels of evidence possible (searching the Cochrane Library and the York Centre for Reviews and Dissemination) and you might want to limit results by publication type if you are finding too many results, and/or focus on Health Technology Assessments (HTAs), diagnostic papers, or cost analyses etc. as appropriate.
- Search healthcare management and business databases: Health Management Information Consortium (HMIC), Health Business Elite (HBE, if available), Business Source Corporate (if available), and the National Health Research Institute’s (NIHR’s) HTA website.
- Search subject appropriate HDAS databases: Medline, EMBASE, CINAHL, PsycINFO, EMCARE, BNI etc.
- Search grey literature sources as appropriate, e.g. government organisation publications, The Health Foundation, The King's Fund, NHS Improvement.
- You may want to search through other NHS organisation policies and publications via an advanced Google search: include “NHS” in your terms, and/or specify your country as UK, and/or limit the search to sites ending with “...nhs.uk” URLs. A mailing list enquiry [see “Appendix 2...”] can elicit documents from librarians at Trusts across the UK.
- Search Google Scholar for key terms or a product’s name or manufacturer’s name.
- Look for product information on manufacturer websites if appropriate.

Results

- In your report, group your deduplicated results into categories and highlight the most useful ones to make it more user-friendly.
- If time allows, synthesise results into an executive summary for the head of your report that highlights the key points and makes any recommendations. Reference the information from within your report that you have used for this.

Resources

- High tier evidence sources: the Cochrane Library, The University of York's Centre for Reviews and Dissemination (CRD), NICE Evidence, the Trip Database, and the Campbell Collaboration.
- Healthcare management and business databases: HMIC (available via HDAS), Health Business Elite (if available), Business Source Corporate (if available), and (NIHR's) HTA website.
- Grey literature sources as appropriate: government and non-government organisation publications, The Health Foundation, The King's Fund, NHS Improvement, etc.
- HDAS databases: AMED, BNI, CINAHL, EMBASE, EMCARE, Medline, PsycINFO, and PubMed.
- Google and Google Scholar.
- Manufacturer websites.

Literature Searching for Care of a Specific Patient

Suggested level of experience required for this search: Advanced (4).

Suggested maximum time to spend on this search: 0.5 – 3 hours (same day service, ideally).

Please read “For ALL Literature Searches” before proceeding.

Planning

- Time is of the essence, prioritise this search!
- **If you receive the request during a clinical meeting where an immediate answer is required**, you will not be able to plan your search. Check point-of-care tools: Dynamed, UpToDate, BMJ Best Practice or Clinical Key, depending on your organisation’s provision, for on-the-spot answers.

If a specific/focused search of point-of-care tools retrieves nothing, try searching within the text of broader entries or scanning a broader entry’s headings and sub-headings.

If you cannot find an answer to the question immediately then advise the requestor and offer to continue the search after the meeting/offline.

- **If you receive the request outside of a clinical meeting, what is your deadline?** If the search is to inform clinical decision-making, when does the decision need to be made and when is the search report required, by whom, and in what format?

Does the requestor want higher-tier evidence only, or would they like case studies/case series? Would they like results from this country only? Do they want to know how other Trusts would treat this patient?

Execution

- Try searching Cochrane Clinical Answers and PubMed Clinical Queries, NICE Evidence - including Clinical Knowledge Summaries (CKS) and NICE Pathways - and the Trip Database.
- Search primary research databases, limiting your search results to the specific age range etc. of the patient in question. For clinical questions, MEDLINE is essential, augmented by one or more of EMBASE, CINAHL, EMCARE, BNI etc. Consider PsycINFO if there is a mental health or psychological dimension.
- Limit your databases search to reviews, guidelines, meta-analyses etc. using limits/filters (unless your requestor would like case reports etc.), at least initially. If your search retrieves nothing then relax these limits to include all kinds of results, and all kinds of patients if you are still retrieving nothing.
- If the requestor wants to know how other Trusts would treat this patient, perform an advanced Google search for the condition/intervention limited to the UK, with “NHS Trust” included in your search terms, to retrieve policy documents from around the country.

Results

- Include links to relevant entries from point-of-care tools, copy and paste the most important parts that answer your requestor's question into your report. Include instructions of how to access the full entries (to save the requestor time, you can check if they have an NHS OpenAthens name/password, and create one for them if required, notifying them in your report).
- If you have found no high tier evidence then state so, as this may be an answer to your requestor's question itself.
- Be sure to emphasise in your report or communications with the requestor that time limitations may preclude a comprehensive search, and so the results returned cannot be considered comprehensive.
- As proving your service's clinical utility is very impactful, be extra sure to ask-for and record feedback from the requestor re: how your search helped.

Resources:

- Point-of-care tools: [BMJ Best Practice](#)/[Clinical Key](#)/[Dynamed](#)/[UpToDate](#).
- High tier evidence sources: [NICE Evidence](#) including [NICE Clinical Knowledge Summaries \(CKS\)](#) and [NICE Pathways](#), [The Trip Database](#), [The Cochrane Library](#) including [Cochrane Clinical Answers](#), [University of York's Centre for Reviews and Dissemination \(CRD, including CRDWeb\)](#), [PubMed Clinical Queries](#), and the Campbell Collaboration.
- HDAS databases: AMED, BNI, CINAHL, EMBASE, EMCARE, HMIC, Medline, PsycINFO, PubMed.
- Google.

Literature Searching for Commissioning

Suggested level of experience required for this search: Proficient (3).

Suggested maximum time to spend on this search: 3-4 hours.

Please read "For ALL Literature Searches" before proceeding.

Planning

- Establish the precise purpose of the search: is your requestor commissioning a new service? Are they decommissioning an old one? Or redesigning an existing one?
- Establish how sensitive information regarding this search is – if it is about decommissioning, the requester may not wish it to be shared with others/available publicly.

Execution

- Generally, focus on resources that have economic evaluations/healthcare economics/social return-on-investment (ROI) figures in them.
- Search The University of York's Centre for Reviews and Dissemination (CRD) for economic evaluations, search the Social Care Institute for Excellence's (SCIE's) Social Care Online for social care related queries, and the National Institute for Health Research's (NIHR's) Health Technology Assessment site if appropriate.
- Search grey literature sources and subject-specific sites appropriate to what is being commissioned: independent charities, governmental and non-governmental organisations and think tanks like The Health Foundation, The King's Fund, Nuffield Trust etc. They often produce or archive economic evaluations of complex interventions.
- If these searches retrieve nothing, search appropriate HDAS databases, limiting results to the last 5 years.

Results

- Make sure the full text of the results you return are open access, as far as possible, as the requestor will likely be sharing the results with a multi-disciplinary (even multi-organisational) team.
- For each of your results, provide a top-line summary of what a service cost, what it improved, and what money it saved/brought-in.

Resources

- High tier evidence sources: the Cochrane Library, The University of York's CRD, NICE Evidence, Trip Database, The Campbell Collaboration, SCIE's Social Care Online.
- NIHR's HTA website.
- Grey literature sources and subject-specific independent charities, NGOs, etc.: The Health Foundation, The King's Fund, Nuffield Trust, etc.
- HDAS databases: AMED, BNI, CINAHL, EMBASE, EMCARE, HMIC, Medline, PsycINFO, PubMed.

Literature Searching for Coursework/Study

Suggested level of experience required for this search: Intermediate (2).

Suggested maximum time to spend on this search: Under 30 minutes.

Planning

- **DO NOT perform a search that is going towards coursework/study**, as the searching will be part of the requestor's learning objectives and will be assessed as their work. Explain your policy to the requestor.
- Respond to the requestor promptly so that they are not waiting and relying on you to do their coursework for them while their deadline approaches!
- Offer training to the requestor instead, suggesting that on a one-to-one or group training session they can search for the topic they have requested, and will come away with useful results.

Execution

- Do not spend very long on finding some initial results for the requestor: these results are intended to encourage the requestor to book on to a training session. Send the results to the requestor along with your offer of training. Depending on which of the resources below your service is currently promoting, or which you happen to have open when you receive the request, do one of the following:
 - Quickly search secondary sources if appropriate to the subject: NICE Evidence and/or Trip Database, copy the links to the results pages for the requestor, or copy a few select recent relevant results OR
 - Quickly search point-of-care tools (BMJ Best Practice/Clinical Key/Dynamed/UpToDate) if accessible and appropriate to the subject, and copy links to suitable entries/topics for the requestor OR
 - Quickly search your library discovery tool and send a few recent relevant results, with full text access, for the requestor OR
 - Quickly search the library catalogue for books and ebooks on the subject and copy links for the requestor OR
 - Perform a scoping search for the requestor, searching by title within an appropriate bibliographic database (such as Medline, EMBASE) or two, and quickly exporting results (as an HDAS pdf report, for example).
- Deliver a full training session with the requestor, ensuring they come away with enough results to use for their coursework/study, plus the confidence and skills to find more on their own.

Results

- Return only a small number of recent relevant results when you reply to the requestor - not enough for them to complete their coursework - with freely available full text access if possible, and explain that these are not comprehensive (but that the requestor can discover more at a training session...)

Resources

- High tier evidence sources: the Cochrane Library, NICE Evidence, the Trip Database, the Campbell Collaboration.
- Point-of-care tools: BMJ Best Practice/Clinical Key/Dynamed/UpToDate.
- Library discovery tool.
- Library catalogue.
- HDAS databases: AMED, BNI, CINAHL, EMBASE, EMCARE, HMIC, Medline, PsycINFO, PubMed.

Literature Searching for Patient Information: Question(s) from a Patient

Suggested level of experience required for this search: Intermediate (2).

Suggested maximum time to spend on this search: 2-3 Hours.

Please read "For ALL Literature Searches" before proceeding.

Planning

- Ask the requestor exactly what is needed and what *level* is needed (e.g., high end evidence or basic information). Speak to the patient if possible to discuss what they would like. The requestor may need to manage their patient's expectations.
- Make sure that the patient understands that you are not a medical professional: information that you give them is not medical advice. Questions and clarification must come from their clinician, your requestor. Use a disclaimer.
- Identify any specific needs the patient has: do they need EasyRead text? Would they prefer audio/film? Do they need it translated into a different language? Is the information for them, or for someone they are looking after?

Execution

- Gather basic information: what is available from the Trust already? Is there a patient leaflet/guideline that you can share? Has the Trust produced any films that are useful? Are there any external leaflets that the Trust has bought (eg, EIDO Healthcare's patient information materials) that you can share?
- Look for other basic information available on the internet via Google, for example a good general description of a condition or procedure: try www.nhs.uk, www.patient.co.uk, and other Trusts' website. Look at NICE Evidence, which also contains a filter for patient information.
- Look at charity and voluntary organisations: these are excellent sources of well-written information, and often include first-hand experiences/advice/support for the patient community. This includes www.healthtalk.org.uk
- Look at royal colleges and academies – like the Royal College of Obstetricians and Gynaecologists (RCOG) or Royal College of Psychiatrists (RCPsych) - and professional societies etc. for their detailed, evidence-based patient information. They often include links to other sources of information and support too.
- Check point-of care tools - for example, many of UpToDate's entries contain *Basics* and *Beyond the Basics* patient information, and many BMJ Best Practice entries contain *Patient leaflets* under the *Resources* tab.
- Search HDAS databases: do any of the results provide evidence or information that is pitched at the right level and is useful?
- Look at social media: is there a YouTube channel associated with a particular charity or organisation with videos of treatments, procedures, other patients? Do they have a Facebook page/Twitter feed

with regular updates about developments, stories in the news, opportunities to meet other people? Are there online forums that offer the opportunity to talk to others, share experiences, offer advice and comfort?

Results

- Do not share results with the patient without first sharing with the requesting clinician (usually by email), with a brief explanation of why they have been chosen. This can be forwarded onto the patient.
- Make sure that results are all open access and easy for patient to find. Do not assume they are proficient at internet searching.

Resources

- Trust intranet and website.
- Other Trusts' websites/documents, via an advanced Google search (include "NHS Trust in your search terms and/or use geographic limits and/or limit to sites with "...nhs.uk" URLs).
- www.NHS.uk website.
- NICE Evidence (use the "information for patients" filter).
- Patient information creators: EIDO Healthcare, www.patient.co.uk, www.healthtalk.org.uk
- Charity and voluntary sector organisations.
- Royal colleges, societies and academies: RCOG, RCPsych, etc.
- Point-of-care tools: UpToDate, Dynamed, BMJ Best Practice, ClinicalKey.
- HDAS databases: AMED, BNI, CINAHL, EMBASE, EMCARE, HMIC, Medline, PsycINFO, PubMed.
- Social Media: Youtube, Twitter, Facebook, etc.
- Google and Bing (for video searching).

Literature Searching for Patient Information: Creating Information Resources for Patients

Suggested level of experience required for this search: Intermediate (2).

Suggested maximum time to spend on this search: 2-3 hours for your search, and an extra 4-5 hours to draft a leaflet.

Please read “For ALL Literature Searches” before proceeding.

Planning

- Ask the requestor exactly what is needed: is it a description of a procedure/treatment? Who for? (e.g., children/carers?) Do they have any information already available (e.g., a first draft, existing information leaflet from elsewhere, a leaflet from a medicine packet)? How much detail is needed?
- Check if your Trust has guidelines for writing for patients.

Execution

- Are there similar leaflets produced by other Trusts? Look for other Trust websites that contain information about the given procedure/treatment/condition.
- Look at www.NHS.uk and NICE Evidence for guidelines.
- Search point-of-care tools: ClinicalKey and UpToDate both have patient information tabs that are pitched at the right level.
- Look at charities related to specific conditions (like the British Heart Foundation) and voluntary sector organisations: they are a good source of reliable information but are sometimes slightly too detailed for a *basic* patient information leaflet.
- Are there any websites that you can add as a useful link for the patient? Any films they can watch?

Results

- Plan your first draft: if the leaflet is in a question/answer format (recommended), can you list the questions? This will help order the information that you need to include in a logical manner.
- Write the first draft of the leaflet. Use language very carefully. For the Layout, leave plenty of white space, use bullet points, avoid repetition, logically order information. Do not forget to include risks and benefits.
- Send your draft to your requestor. Add a list of resources that the information came from (if applicable).
- Be prepared for re-drafts and updates!

Resources

- Trust intranet and website.
- Other Trusts' websites/documents, via an advanced Google search (include "NHS Trust in your search terms and/or use geographic limits and/or limit to sites with "...nhs.uk" URLs).
- www.NHS.uk website.
- NICE Evidence (use the "information for patients" filter).
- Patient information creators: EIDO Healthcare, www.patient.co.uk, www.healthtalk.org.uk
- Charity and voluntary sector organisations.
- Royal colleges, societies and academies: RCOG, RCPsych, etc.
- Point-of-care tools: UpToDate, Dynamed, BMJ Best Practice, ClinicalKey.
- HDAS databases: AMED, BNI, CINAHL, EMBASE, EMCARE, HMIC, Medline, PsycINFO, PubMed.
- Social Media: Youtube, Twitter, Facebook, etc.
- Google and Bing (for video searching).

Literature Searching for a Quality Improvement (QI) Project

Suggested level of experience required for this search: Proficient (3).

Suggested maximum time to spend on this search: 2-3 hours.

Please read "For ALL Literature Searches" before proceeding.

Planning

- If possible, arrange a meeting with the requestor to understand the aims and background of the project.

Execution

- Search for existing QI projects that are similar, as well as for regular (non-QI specific) evidence for the project. If you have access to a network of QI projects such as *Life QI*, check this to see if any similar QI projects are listed.
- Include all levels of evidence as agreed with the requestor.
- Search for relevant guidelines from international, national and local sources as appropriate via Trip, NICE and point-of-care tools (e.g. DynaMed Plus contains links to various international guidelines).
- Search HDAS databases: AMED, BNI, CINAHL, EMBASE, EMCARE, HMIC, Medline, PsycINFO, PubMed.
- Search Google Scholar for books or other published information.
- Search BMJ Open Quality via its website for articles and commentary.
- Search locally within your book and ebook catalogue for anything that could be useful, including general texts on the area of interest, and guidance on conducting a QI project if needed. If your service keeps a core list of QI resources that could be useful for the requestor to read then search within this and/or direct the requestors to this.

Results

- Categorise your deduplicated results, including links to the full text wherever possible, and highlight key ones to make your report user-friendly.

Resources

- Local QI network.
- International, National, and local sources of relevant guidelines: Trip database, NICE Evidence, Scottish Intercollegiate Guidelines Network (SIGN).
- Point-of-care tools (DynaMed, UpToDate, ClinicalKey, BMJ Best Practice).
- HDAS databases: AMED, BNI, CINAHL, EMBASE, EMCARE, HMIC, Medline, PsycINFO, PubMed.
- Google Scholar.
- BMJ Open Quality.
- Library catalogue.

Literature Searching to Support Research/Writing for Publication:

Suggested level of experience required for this search: Proficient (3).

Suggested maximum time to spend on this search: 3-4 hours.

Please read "For ALL Literature Searches" before proceeding.

Planning

- Medline and EMBASE need to be searched as a minimum, select other databases as appropriate to the subject of the search.
 - See page 6 of Thames Valley, Wessex and South West healthcare librarians' guidance *The Literature Search Process: Guidance for NHS Researchers*. Version 7.0 January 2019 for an extensive table listing databases and resources for searching: https://kfh.libraryservices.nhs.uk/wp-content/uploads/2019/01/Lit_search_protocols_protocols_2019.pdf
- **Establish the scope of the topic and that any search parameters are justified.** A search underpinning a research topic may be more similar in scope and style to that carried out for a systematic review whereas a search underpinning writing for publication may possibly permit a more focused search, but you need to check with the requestor what is appropriate.
- **Establish if the requestor is interested in a specific publication/study type. If they are, discuss the use of appropriate search filters.** If you are searching in HDAS, you can limit your search results to specific publication type(s) by selecting them in the "limits" tab. If you are searching using native interfaces, you can use common filters, including:
 - The Cochrane filters: https://handbook-5-1.cochrane.org/chapter_6/6_4_11_search_filters.htm
 - The Scottish Intercollegiate Network (SIGN) filters: <https://www.sign.ac.uk/search-filters.html>
 - McMaster University Health Information Research Unit (HIRU) filters: https://hiru.mcmaster.ca/hiru/HIRU_Hedges_home.aspx
- If the research is for a **dissertation topic or research assignment** it is more appropriate to offer an assisted search or training session. [see "Searching for Coursework/Study"]

Execution

- **Searches will be comprehensive** but depending on the agreed scope of the search it may be permissible to use focusing techniques (using *major*ed subject headings/title-only text searching) to improve relevancy over recall particularly if the topic is very broad.
- **Searches need to be reproducible** so keep the strategy clearly structured and easy to follow. Details of the strategy will be outlined in the research paper or article so keep this in mind.
- **It is permissible to apply language limits and publication year limits** but this must be justifiable in relation to the topic. If search filters have been used, these must be documented and referenced in the report/article.

- **It is fine to remove comments, letters and editorials, either by screening your search results manually or by adding publication type limits/filters to your search.** Check with requestor if they would like conference abstracts to be included in the search.

Results

- Be prepared to provide **supporting details, including a narrative description**, explaining the search strategy so the requestor can include this in their write-up.
- **For research reports**, the strategy is detailed in full in the appendices.
- **For journal articles**, even though shorter, most journals require authors to supply at least some brief explanation of the search (databases covered and search terms used/concepts searched for. They would also justify search parameters with any exclusions if applicable):
 - Advise the requestor to check the instructions for authors for the specific journal they are intending to submit to.
 - Many journals endorse PRISMA, a list can be found at the following link: <http://www.prisma-statement.org/Endorsement/PRISMAEndorsers>. If the journal for intended article submission is listed it may be relevant for the requestor to check in the instructions for authors whether they need to present their research in line with some of the PRISMA guidance.

Resources

- High tier evidence sources: the Cochrane Library, The University of York's CRD, NICE Evidence, Trip Database, The Campbell Collaboration, SCIE's Social Care Online.
- Medline and EMBASE, other HDAS databases and specialist databases as required by the subject of the search: AMED, BNI, CINAHL, EMCARE, HMIC, Medline, PsycINFO, PubMed, etc.
- Thames Valley, Wessex and South West healthcare librarians' guidance [*The Literature Search Process: Guidance for NHS Researchers. Version 7.0 January 2019*](#)
- [PRISMA](#)
- Common filters for database searches: [Cochrane filters](#), [SIGN filters](#), and [McMaster University HIRU filters](#).

Literature Searching for Service Change, Guideline, or Policy

Suggested level of experience required for this search: Proficient (3).

Suggested maximum time to spend on this search: 3-4 hours.

Please read “For ALL Literature Searches” before proceeding.

Planning

- Establish the specific circumstances of the service change/policy/guideline and why it is needed/wanted.
- Consult your Trust intranet’s policies section for existing documents, and search within these for references. (Your full search strategy should retrieve the documents referenced, if it does not, consider why not. - If they are outside of the remit of the search or the date range specified by the requestor then that is fine).

Execution

- Perform an advanced Google search for policies/guidelines from other Trusts, if appropriate: include “NHS Trust” in your search terms and/or narrow the search to sites with URLs ending “...nhs.uk”, and/or limit the search to UK sites etc. in the advanced search options.
- Search NICE Evidence using the Guidance filter, the Scottish Intercollegiate Guidelines Network’s (SIGN)’s website, and the Trip Database’s “Guidelines” section.
- Focus on high-level evidence from The Cochrane Library and The University of York’s Centre for Reviews and Dissemination (CRD) for systematic reviews and synopses.
- If these searches retrieve nothing, search appropriate databases using HDAS, limiting your results to the last 5 years (or the year of the existing guidelines/policy’s publication).

Results

- Your report may be getting shared amongst a multi-disciplinary team, so try and make it easily digestible.
- For the same reason, try to make sure the full text of results are open access as far as possible.

Resources

- Local sources of relevant guidelines: Trust intranet, Trust website, other Trusts’ websites.
- National and international sources of relevant guidelines: NICE Evidence, SIGN.
- High tier evidence sources: the Cochrane Library, The University of York’s CRD, The Trip Database.
- Other high tier evidence sources, if subject appropriate: SCIE’s Social Care Online, The Campbell Collaboration.
- HDAS databases (if nothing found elsewhere): AMED, BNI, CINAHL, EMBASE, EMCARE, HMIC, Medline, PsycINFO, PubMed.
- Google.

Literature Searching to Support Systematic Reviews

Suggested level of experience required for this search: Expert (5).

Suggested maximum time to spend on this search: No maximum time.

Please read “For ALL Literature Searches” before proceeding.

Planning

- General points to know:
 - **Carrying out a systematic review is a highly structured activity governed by internationally recognised guidance.** Requestors can mistakenly use the terminology “systematic review” when they really wish to carry out a *systematic search* of the literature. If they actually want the latter, please see the section on “Literature Searching to Support Research/Writing for Publication”.
 - **A systematic review** is a large body of work covering the gathering, collation and analysis of all the available evidence for a given research topic. The topic normally will be looking at some type of intervention and its effectiveness. Due to the scale of the work a systematic review often takes a number of months and your help and advice may be sought at different stages of the review over this period.
 - **A review protocol** is written prior to beginning work on the review proper. Protocols are registered on the PROSPERO database, unless the requestor is writing a review for Cochrane in which case it is submitted to Cochrane and from there automatically launched onto Prospero.
 - **Internationally recognised guidance governing systematic reviews** - Be familiar with and follow the 3 lead sources of guidance. A systematic review must follow this guidance. The 3 sources essentially give the same instructions but complement and overlap each other. PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) is endorsed by both the Cochrane’s and The University of York’s Centre for Reviews and Dissemination’s (CRD’s) guidance. It takes the form of brief checklists and is a good place to start for those new to the process.
 - **Cochrane Handbook:** <https://training.cochrane.org/handbook/current>
 - **CRD guidance:** https://www.york.ac.uk/media/crd/Systematic_Reviews.pdf
 - **PRISMA** has 3 elements:
 - <http://www.prisma-statement.org/> (Checklist for each section of the review)
 - <http://www.prisma-statement.org/Protocols/> (PRISMA-P guidance for writing the review protocol)
 - <http://www.prisma-statement.org/documents/PRISMA%202009%20flow%20diagram.pdf> (Flow diagram, charting the flow of information through the course of the review)
- Check with the requestor regarding the following:
 - **Have they performed a scoping search and is the research question fully formulated?** If not, they will want you to undertake some scoping searches to help finalise the question. They will want to see what research has already been done and also the number of references retrieved for different scenarios will be important to keep the project manageable. If they have carried out some

preliminary searches it is useful to see the strategies to help you understand the search topic and its scope.

- **If they have finalised the review question and a scoping search has been undertaken, have they written their protocol?**
 - If yes, you need to see this as it details the inclusion and exclusion criteria for the search in addition to giving you a clearly defined research question.
 - If no, check they are aware of the following 4 areas of guidance which will help them write their protocol:
 - The PRISMA protocols guidance <http://www.prisma-statement.org/Protocols/>
 - The PROSPERO website guidance <https://www.crd.york.ac.uk/prospero/#aboutregpage>
 - The University of York CRD guidance (Chapter 1.2)
 - The Cochrane Handbook:
 - 'Cochrane protocols' <https://training.cochrane.org/handbook/current/chapter-ii#section-ii-1-4>
 - 'Protocol development' <https://training.cochrane.org/handbook/current/chapter-01#section-1-5>
- **Is this the requestor's first systematic review?**
 - If yes, regarding the methodology and the reporting of review findings, PRISMA guidance is very easy to follow and is endorsed by both the University of York's CRD and the Cochrane Collaboration. It essentially encapsulates, in its checklists, the detailed guidance of University of York's CRD and the Cochrane Handbook.
 - Refer new systematic reviewers to the PRISMA website first if they haven't visited the site as it gives an easy to understand view of the whole process: <http://www.prisma-statement.org/>

Execution

- **The database searches must be broad in scope:**
 - It is important that search strategies are very sensitive/inclusive and contain both use of databases' indexing terms along with text searches, so as not to miss any relevant research.
 - Indexing terms are most often exploded, also include synonyms, truncate terms, and take account of American and British English spelling. Use of floating subheadings and adjacency commands can also extend your coverage.
 - Comprehensiveness: Experts in the field advise that 1 in every 15 to 1 in every 20 references selected as relevant from the results is a rough indication that the strategy is broad enough not to miss anything.

- **Avoid language and publication bias:**
 - Language and publication bias can creep in when limiting the parameters of the search. **To avoid language bias**, results should not be limited just to English.
 - To **avoid publication bias** conference abstracts should not be excluded from the database results. Conference abstracts give information on the latest work which is yet to be formally published and helps to identify authors or research establishments worth contacting. This extends the search beyond what is available electronically.
 - In addition to following-up on conference abstracts **grey literature** should also be searched. Helpful guidance developed by the University of Exeter (Alison Bethel et al.) can be found at: https://medicine.exeter.ac.uk/media/universityofexeter/medicalschoollresearch/pentag/documents/Grey_Lit.pdf
- **Minimum coverage of databases:**
 - **Please note:** Native interfaces are preferable to enable those in non-NHS environments to replicate searches from completed systematic reviews.
 - Medline, EMBASE, and the Cochrane Library are the minimum for coverage. Other databases then as applicable.
 - Included on page 6 of Thames Valley, Wessex and South West healthcare librarians' guidance **The Literature Search Process: Guidance for NHS Researchers. Version 7.0 January 2019** is an extensive table listing databases and resources for searching: https://kfh.libraryservices.nhs.uk/wp-content/uploads/2019/01/Lit_search_protocols_protocols_2019.pdf
 - Search clinical trials registers for in-progress trials:
 - ClinicalTrials.gov: <https://www.clinicaltrials.gov/>
 - World Health Organisation's International Clinical Trials Registry Platform (ICTRP): <http://apps.who.int/trialsearch/Default.aspx>
 - Perform citation searches of relevant results retrieved, using citation indexes such as Web of Knowledge, if available: www.webofknowledge.com
 - Google Scholar and PubMed permit limited citation searching via their "cited by" links (but these are not comprehensive).
- **Search strategies should ideally follow a structured framework such as the PICO structure**, however if **PICO** is not a natural fit for the topic there are other structures available such as SPIDER, ECLIPS(E)
 - City University outlines some of these: <https://libguides.city.ac.uk/c.php?g=663952&p=4696473>
 - Also see Andrew Booth "Alternative Question Structures for Different types of systematic review": https://resources.lhnn.nhs.uk/wiki/GetFile.aspx?Page=Yorkshire_and_Humber_LKS.Literature-Searching-

[Resources&File=Alternative%20Question%20Structures%20for%20Different%20Types%20of%20Systematic%20Review.pdf&AspxAutoDetectCookieSupport=1](#)

- **Parts of the guidance covering designing the search strategy:**
 - Cochrane Handbook for Systematic Reviews of Interventions:
 - Chapter 4: “Searching for Studies”
<https://training.cochrane.org/handbook/current/part-2>
 - Section 4.4 specifically covers “Designing search strategies”
<https://training.cochrane.org/handbook/current/chapter-04#section-4-4>
 - Section 4.4.7 advice on using search filters to retrieve specific types of study:
<https://training.cochrane.org/handbook/current/chapter-04#section-4-4-7>
 - Cochrane filters: https://handbook-5-1.cochrane.org/chapter_6/6_4_11_search_filters.htm
 - University of York CRD guidance: https://www.york.ac.uk/media/crd/Systematic_Reviews.pdf
See appendix 2 for guidance of structuring the search strategy and the use of filters.
- **The PRESS Checklist** (Peer Review of Electronic Search Strategies) can be useful as it provides a list of what elements the search strategy should have in order to be robust. See table 1 at the following link: <https://www.sciencedirect.com/science/article/pii/S0895435616000585>
- **Strategy details:**
 - Document all strategies, the requestor needs to provide details of these both in the review write-up and in the protocol submission.
 - The requestor also needs details of the number of records retrieved for each database search prior to the removal of duplicates to comply with the PRISMA guidance on the reporting of the results so retain these figures.
 - Save all strategies on the database servers where possible. The requestor will need re-runs of these prior to completing the review and writing it up, as several months will have normally passed during this process. For grey literature searches keep a record of the search statements used if not possible to save online.
 - As a back up, keep a Word file of all the search strategies used for easy reference.

Results

- Save the results in the .ris file format, which is compatible with most reference management software.
- If you have site-wide access to reference management software you may have ‘organisation specific’ arrangements for supplying the results such as loading the results directly into the software, removing duplicates and giving the requestor the file details to access the results directly.

If the requestor is based offsite or no site package is available, they will be able to remove the duplicates in whichever reference management software they have chosen.

Many reference management software applications allow you to upload .ris files into online libraries that you can share with users – discuss your options.

- Some users may wish to use Systematic review software packages to aid the process of screening and data extraction. Two popular packages are Rayyan <https://rayyan-prod.qcri.org/welcome>, which is freely available to all, and Covidence <https://www.covidence.org/home>, which is freely available to those writing a Cochrane review. Useful further information and a comparison of the two products can be found at the following online article: <https://journals.library.ualberta.ca/jchla/index.php/jchla/article/view/28214/20998>
- For the reporting of results in systematic reviews the requestor will need to follow the PRISMA flow diagram: <http://www.prisma-statement.org/documents/PRISMA%202009%20flow%20diagram.pdf>
- **Important reminder:** The requestor needs to know **the total number of records retrieved prior to the removal of duplicates** as this is required information for the PRISMA flow diagram. Please provide this to the requestor if you have already removed the duplicate references.

Resources:

- Guidance for conducting the review:
 - [Cochrane Handbook](#)
 - [CRD Guidance](#).
 - [PRISMA](#) Statement (including their [Checklist for each section of the review](#), the [PRISMA-P guidance for writing the review protocol](#), and [their flow diagram for charting the flow of information through the course of the review](#)).
 - [PROSPERO](#).
 - [PRESS Checklist](#).
 - Dr Andrew Booth's ["Alternative Question Structures for Different types of systematic review"](#)
 - City University's LibGuide featuring a ["Using a framework to structure your question" table](#).
 - Systematic review software packages [Rayyan](#) and [Covidence](#) are [compared in McMaster University Research Coordinator Rachael Couban's online article](#).
- Sources to search for the review:
 - High tier evidence sources: the Cochrane Library, The University of York's Centre for Reviews and Dissemination (CRD), NICE Evidence, the Trip Database, and the Campbell Collaboration.
 - Point-of-care tools: BMJ Best Practice/Clinical Key/Dynamed/UpToDate.
 - HDAS databases, though searching using native interfaces wherever possible is advised: Medline and EMBASE are essential and can be augmented by searches of BNI, CINAHL, EMCARE, HMIC, PsycINFO, and PubMed as appropriate for the search subject.
 - Grey literature sources as identified by Alison Bethel et al.'s ["Searching Grey Literature"](#) and [The Literature Search Process: Guidance for NHS Researchers. Version 7.0 January 2019](#) by Thames Valley, Wessex and South West healthcare librarians: government and non-governmental

organisations' (NGOs') publications, including the Health foundation, the King's Fund, Nuffield Trust, charities' websites etc.

- Google and Google Scholar.
- Citation indexes including Web of Knowledge.
- Prospective Clinical Trials Registers: [ClinicalTrials.gov](https://clinicaltrials.gov) and The World Health Organisation's (WHO's) [International Clinical Trials Registry Platform \(ICTRP\)](https://www.who.int/clinicaltrialsregistryplatform).

draft

Literature Searching for Teaching/Presentation

Suggested level of experience required for this search: Novice (1).

Suggested maximum time to spend on this search: 1 hour.

Please read “For ALL Literature Searches” before proceeding.

Planning

- This search need not be exhaustive if the purpose is to provide an update and/or overview of a topic for the requester.
- Results can be limited to those published in the last 5-8 years unless a historical focus is required, or if there is a lack of recent evidence.

Execution

- Consider searching point-of-care tools and emailing relevant entries to the requester, or copying and pasting trenchant text from entries - along with hyperlinks to the full entries - into a report.
- Search the Trip Database using the ‘Latest and Greatest’ filter, and NICE Evidence using the “guidance and policy” and “secondary evidence” filters plus a last-5-years date limit, to identify recent high quality evidence.
- Consider a search of the Education Resource Information Center (ERIC) if the subject of the search involves teaching.
- Limit database results to review papers/important trials/consensus statements/guidelines.

Results

- Aim to provide between 15-25 results as a word or PDF report with the search strategy included.
- Offer full-text papers wherever possible, especially open access, freely available papers, so the requestor can easily share them with pupils or colleagues if needed.

Resources

- High tier evidence sources: the Cochrane Library, The University of York’s Centre for Reviews and Dissemination (CRD), NICE Evidence, the Trip Database, and the Campbell Collaboration.
- Point-of-care tools: BMJ Best Practice/Clinical Key/Dynamed/UpToDate.
- HDAS databases: AMED, BNI, CINAHL, EMBASE, EMCARE, HMIC, Medline, PsycINFO, PubMed.
- Education Resource Information Center (ERIC)

Appendices

Appendix 1 - Resources

The following list represents all the resources cited within this protocol, organized hierarchically and alphabetically. All are freely available or accessible via NHS OpenAthens accounts unless otherwise stated.

For further resources, please see Thames Valley, Wessex and South West healthcare librarians' guidance *The Literature Search Process: Guidance for NHS Researchers. Version 7.0 January 2019*:
https://kfh.libraryservices.nhs.uk/wp-content/uploads/2019/01/Lit_search_protocols_protocols_2019.pdf

Point-of-Care Tools:

- BMJ Best Practice: <https://bestpractice.bmj.com/info/>
- Clinical Key (requires subscription): <https://www.clinicalkey.com/#!/>
- Dynamed (requires subscription): <https://www.dynamed.com/>
- UpToDate (requires subscription): <https://www.uptodate.com/home>

High Tier Evidence Sources:

- Campbell Collaboration: <https://campbellcollaboration.org/>
- The University of York's Centre for Reviews and Dissemination (CRD): <https://www.york.ac.uk/crd>
- The Cochrane Library: <https://www.cochranelibrary.com>
 - Cochrane Clinical Answers: <https://www.cochranelibrary.com/cca>
- NICE Evidence: www.evidence.nhs.uk
 - NICE Clinical Knowledge Summaries (CKS): <https://cks.nice.org.uk/#?char=A>
 - NICE Pathways: <https://pathways.nice.org.uk/>
- PROSPERO: <https://www.crd.york.ac.uk/prospERO/#aboutregpage>
- PubMed Clinical Queries: <https://www.ncbi.nlm.nih.gov/PubMed/clinical>
- Scottish Intercollegiate Guidelines Network (SIGN): <https://www.sign.ac.uk/>
- Social Care Institute for Excellence (SCIE) Social Care Online: <https://www.scie-socialcareonline.org.uk/>
- The Trip Database: <https://www.Tripdatabase.com>

Primary Research Databases:

- Citation Indexes:
 - Web of Knowledge (requires subscription): www.webofknowledge.com
- HDAS Databases: AMED, BNI, CINAHL, EMBASE, EMCARE, HMIC, Medline, PsycINFO (and PubMed with limited search functionality) accessible via NICE HDAS interface: <https://hdas.nice.org.uk/>
 - HDAS Searching Help page: <https://hdas.nice.org.uk/help>
 - HDAS Searching Help leaflet (short): <https://www.nice.org.uk/Media/Default/About/NICE-Communities/Library-and-knowledge-services-staff/Training-materials/HDAS-quick-guide-Oct-16.pdf>
 - HDAS Searching Help leaflet (full): <https://www.nice.org.uk/Media/Default/About/NICE-Communities/Library-and-knowledge-services-staff/Training-materials/HDAS-full-user-guide-Oct-16.pdf>

- Prospective Clinical Trials Registers:
 - ClinicalTrials.gov: <https://www.clinicaltrials.gov/>
 - World Health Organisation's (WHO's) International Clinical Trials Registry Platform (ICTRP): <http://apps.who.int/trialsearch/Default.aspx>
- PubMed (with full search functionality): <https://www.ncbi.nlm.nih.gov/PubMed/>

Specialist Resources/Databases:

- BMJ Open Quality: <https://bmjopenquality.bmj.com/>
- Business Source Corporate (subscription required): <https://www.ebsco.com/products/research-databases/business-source-corporate>
- Education Resources Information Center (ERIC): <https://www.eric.ed.gov/>
- Health Business Elite (subscription required): <https://health.ebsco.com/products/health-business-elite>
- National Institute of Health Research (NIHR) Health Technology Assessment (HTA): <https://www.nihr.ac.uk/>
- Specific device manufacturer websites

Grey Literature Sources:

- Government organisations' publications and websites:
 - NHS Improvement: <https://improvement.nhs.uk/>
 - NHS public website: www.NHS.uk
 - Other Trusts' websites
- Non-government organisations' publications and websites:
 - Independent charities, think tanks, and voluntary sector organisations:
 - The Health Foundation: <https://www.health.org.uk/>
 - The King's Fund: <https://www.kingsfund.org.uk/>
 - The Nuffield Trust: <https://www.nuffieldtrust.org.uk/>
 - Condition-specific charities:
 - British Heart Foundation (BHF): <https://www.bhf.org.uk/>
 - Patient information creators:
 - EIDO Healthcare: <https://www.eidohealthcare.com/>
 - www.healthtalk.org.uk
 - www.patient.co.uk
 - Royal colleges, societies and academies:
 - Royal College of Obstetricians and Gynaecologists (RCOG): <https://www.rcog.org.uk/>
 - Royal College of Psychiatrists (RCPsych): <https://www.rcpsych.ac.uk/>

For further sources see Alison Bethel et al.'s "Searching Grey Literature":

https://medicine.exeter.ac.uk/media/universityofexeter/medicalschoo/research/pentag/documents/Grey_Lit.pdf

For public health sources specifically see:

<http://annegrailkworkshop.pbworks.com/w/page/114376834/Useful%20resources>

Local Resources:

- Library Catalogue
- Library Discovery Tool
- Local QI Network
- Trust Intranet
- Trust Website

General Sources:

- Bing (for video searches): <https://www.bing.com/>
- Google: <https://www.google.com>
- Google Scholar: <https://scholar.google.com/>
- Social Media:
 - Youtube: <https://www.youtube.com/>
 - Twitter: <https://twitter.com/home>
 - Facebook: <https://www.facebook.com/>

Resources for Conducting Systematic Review Searches:

- Cochrane Handbook <https://training.cochrane.org/handbook/current>
- CRD Guidance: https://www.york.ac.uk/media/crd/Systematic_Reviews.pdf
- PRISMA Statement: <http://www.prisma-statement.org/>
 - PRISMA-P guidance for writing review protocols: <http://www.prisma-statement.org/Protocols/>
 - PRISMA Flow diagram: <http://www.prisma-statement.org/documents/PRISMA%202009%20flow%20diagram.pdf>
 - PRISMA-endorsing journals list: <http://www.prisma-statement.org/Endorsement/PRISMAEndorsers>
- Systematic review software packages are discussed in McMaster University Research Coordinator Rachael Couban's online article at <https://journals.library.ualberta.ca/jchla/index.php/jchla/article/view/28214/20998>
 - Covidence (for Cochrane reviews): <https://www.covidence.org/home>
 - Rayyan: <https://rayyan-prod.qcri.org/welcome>

For further help structuring a systematic review search strategy, see:

- PRESS Checklist: <https://www.sciencedirect.com/science/article/pii/S0895435616000585>
- Dr Andrew Booth's "Alternative Question Structures for Different types of systematic review": https://resources.lihnn.nhs.uk/wiki/GetFile.aspx?Page=Yorkshire_and_Humber_LKS.Literature-Searching-Resources&File=Alternative%20Question%20Structures%20for%20Different%20Types%20of%20Systematic%20Review.pdf&AspxAutoDetectCookieSupport=1
- City University's LibGuide featuring a "Using a framework to structure your question" table: <file:///localhost/%E2%99%A3%09https://libguides.city.ac.uk:c.php%3Fg=663952&p=4696473>

For common filters to use when searching databases using native interfaces, see:

- The Cochrane filters: https://handbook-5-1.cochrane.org/chapter_6/6_4_11_search_filters.htm
- SIGN filters: <https://www.sign.ac.uk/search-filters.html>
- McMaster University Health Information Research Unit (HIRU) filters: https://hiru.mcmaster.ca/hiru/HIRU_Hedges_home.aspx

Appendix 2 - Troubleshooting / FAQs / Tips and Tricks

How many results are enough?

This of course depends on the search subject, and the requestor.

Can you glean from your requestor how many results they would like to receive? KnowledgeShare's online search request forms have a field for requestors to state an amount (but it is not a mandatory/required field). If you meet their number by adding limits or any contrived means, make sure you tell them what you have done and make it clear your results are not comprehensive. Offer to rerun the search without the contrivances.

You may not be able to meet your requestor's expectations if they have unrealistic ideas of what is out there on a topic, but they can help you know whether to expect a high yield or not.

Some requestors will be happy to sift through hundreds of results, others will not. If you can establish a dialogue with the requestor, and establish that the searching process is iterative, this can help manage their expectations.

If you are confident that your search strategy is robust, then your yield just reflects the body of evidence, whether you have "too much" or "too little", but you can adjust your returns using the methods below.

What if my search is retrieving too little, or nothing at all?

- Do a quick sense check:
 - Have you spelled your text terms correctly?
 - Have you used both text searches as well as subject heading searches?
 - Have you used appropriate subject headings?
 - Have you combined searches in the correct way?
 - Are there any limits on your search that you did not mean to impose (i.e., full text only)?
 - If you have knowingly imposed limits, can you relax/remove them within your requestor's criteria?
 - Are there more sources you can search? Have you looked *everywhere*?
- Can you remove phrase-searches or remove/widen adjacency commands to make your search more sensitive?
- Have you truncated text searches wherever possible? i.e., could you go from using "*testicular cancer*" to using *testic* adj3 cancer** to using *testic* cancer**?
- Can you introduce more synonyms? i.e., (*teste* or testic* or scrot**) and (*cancer* or neoplasm* or oncolog* or tumor* or tumour**)
- Can you search within all fields of records, rather than just the title and abstract fields?
- Have you exploded all your subject heading searches?

- Can you search a level above your current subject heading level, thus searching more broadly, without retrieving too much irrelevant material?
- Does a prospective or retrospective citation search retrieve anything?
- Can you (with your requestor's input) broaden the focus of the search and retrieve more general results? Or can you search within the text of more general results? i.e., Are there chapters or sections within books/ebooks with a broader focus?
- Could it be that you are searching within an area where there has just not been very much research published? If so, can you encourage your requestor to conduct some (using library services in the process...)
- Consult colleagues locally, or with a mailing list enquiry (see below).

Whichever of the methods you use, be sure to inform your requestor what you have done and why.

What if my search is retrieving too much?

- Do a quick sense check:
 - Have you used appropriate subject headings?
 - Have you combined searches in the correct way?
 - Have you used appropriate text terms?
 - Have you truncated them in the right places, or has a term truncated at the wrong point opened the floodgates? For example, if you were looking for testicular literature, *testic** would be appropriate truncation, while *test** would retrieve a huge number of irrelevant results.
- It could be that you are just searching within an area where there is a large body of research evidence published. If your search topic is broad, or you are searching within an area that is rich in research, can you (with your requestor) narrow the subject down?
- Can you increase the specificity of your search using limits, justifiably? i.e., can you add date limits, and/or population limits, and/or language limits to the search? If you have already applied some, can you limit these further? i.e., changing your date limit from the last 10 years to the last 5 years?
- Are any of your text terms too "noisy" and retrieving irrelevant results? i.e. common terms like *exam** or *clinical** etc., or terms with synonyms unrelated to your subject.
- Could you use adjacency commands or phrase-searching to make your text searches more specific without being too specific? i.e., could you go from using *testic* cancer** to using *testic* adj3 cancer** or "*testicular cancer*"?
- Can you justify searching for your terms within just the title fields of records, rather than the title and abstract fields?

- Could you search without exploding subject headings? Could you search using only major subject headings? Could you search using subheadings with your subject headings, to hone in certain aspects of your topic?
- Could you limit your search to just secondary evidence, and retrieve only reviews/meta-analysis and other higher level evidence for your requestor?
- Consult colleagues locally or with a mailing list enquiry (see below).

Whichever of the methods you use, be sure to inform your requestor what you have done and why.

Checking the rigour of your search.

If you have conducted a search of HDAS databases, try a quick search of PubMed: if your strategy is robust, in theory you should not then retrieve anything from PubMed (other than very recent results!) that your HDAS search did not retrieve.

Mailing list enquiries.

- If you are struggling to get to grips with a search, if you cannot find any results or retrieve too many, you can consult national mailing lists of librarians who will give you suggestions.
- Visit www.jiscmail.ac.uk and create an account at this page <https://www.jiscmail.ac.uk/cgi-bin/webadmin?GETPW1=&X=&Y=> using your nhs.net or work email address.
- Subscribe to the LIS-MEDICAL, CLIN-LIB, and LIS-LINK distribution lists, and any regional groups local to you, by searching for them by title on the advanced search page: <https://www.jiscmail.ac.uk/advancedsearch.html>
- Once you are subscribed you can send requests for help with tricky searches to 100s of colleagues by emailing your queries to [[title of distribution list](#)][@JISCMAIL.com](mailto:JISCMAIL.com) etc. (You will need to set up rules/filters to send all from these lists to folders in your email client, or your inbox will get too crowded).
- Contact Health Education England (HEE) to subscribe to other regional mailing lists too: <https://www.hee.nhs.uk/our-work/library-knowledge-services#> (see the “Senior Library and Knowledge Services Leads” drop-down for contacts).

When requestors don't respond to your query emails!

If queries arise when you are searching that require your requestor's input, but your requestor does not respond to your emails or calls, you are well within your rights to pause the search until you hear back, as long as you have made every effort to get in touch and progress is prevented by their silence.

[BACK Cover]

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