# Transcript of video ‘Using search history and subject headings to build a stronger systematic-style search’

Creating a search for a systematic review requires more than just searching for a few terms in a database – you need to have thought through your approach, tested different options and made intentional choices that lead to the best possible search for your topic. In the last video we looked at finding the right concepts for your topic, and started testing our search in a database. This video will build from there, and will include: Using search history in databases to help you test and build your search and Adding subject headings into your search to make it more robust

We’re creating a systematic search for an example review which is aiming to assess the impact of mHealth interventions on Australian First Peoples’ health. These search concepts and keywords were developed in the last video. Let’s look at how I searched for these concepts in the Medline Ebscohost database. Many other databases have the same options as Medline so you can use these techniques for many different disciplines.

You can see that I’ve searched for each of the concepts by themselves, and that I’m using the search history view to combine them together. Librarians sometimes refer to searching like this as ‘line searching’ because you build your search line-by-line. Searching like this gives me a great deal of control over my search and the way I join ideas together and also lets me test out different approaches, without having to type all of my keywords in multiple times.

This search is a good start, but for a really thorough and robust systematic search, I need to add subject headings to my search. This is especially important in health disciplines, because subject headings are an important feature of health databases like Medline, but many other disciplines use subject headings in databases – they might be called a thesaurus, or a controlled vocabulary. Subject headings are assigned to articles to indicate what the research is about. If you’ve never used subject headings before, or need a refresher, this video is a useful starting point. If subject headings are available in your database, adding them to your search helps you to be confident you’ve found everything, because the subject headings will often find relevant articles that didn’t include your keywords.

To add subject headings to your search, you’ll need to look up the right headings in each database – you need to use the exact subject heading, or your search won’t work properly. In Medline Ebscohost I can look up subject headings in the MeSH 2021 menu – MeSH is the name of the subject headings used by Medline To search for subject headings, pick one of your search concepts and start looking up the key terms to see if there are appropriate headings. I’m going to start with mhealth – when I search for this term, Medline suggests the use of telemedicine instead – to decide if this is appropriate for your review, click on the term so you can see any narrower headings, or broader headings. You can also use the scope note to see how the term is defined. For my review, I think this subject term is appropriate – it isn’t too broad or too narrow – and I’m going to include all of the narrower terms too. And then I’ll search for these terms – you can see that the database adds some code to my search to make sure the words are searched as subject headings. Now I need to check some of the other terms from my mHealth concept – I'll search for smart phone next – There is a matching heading, but it looks like it’s being used for just the idea of the phone, and isn’t necessarily linked to health services – I think that this is too broad for my search so for now I won’t include it, or other technology specific terms, but before I finalise my search I should test including the term to see if it improves my search.

Now let’s look for subject headings about First Nations people in Australia. Even though I have decided to search this idea as two concepts in my keywords, I’m going to look for them together in the subject headings first. Medline is suggesting the use of the term ‘Oceanic Ancestry Group’ - This sounds like it will be too broad for my purposes, and when I read the scope note, I can see that this heading term would include groups of people beyond Australia. The subject headings available are not specific enough to be relevant for my review question. Therefore, for this concept, I’m going to not include a subject heading. I do need to check for subject headings about Australia, and I’ll include the term for Australia, and all the narrower terms listed below it.

You can see in my search history that each of the subject heading searches are appearing, with my keyword searches. To search for everything together – the keywords and the subject headings, I can combine the lines together. First I need to join any lines that are about the same concept – so I need to combine my keywords about mHealth with my subject headings about mHealth – I'll combine them with OR, to get one big search about everything to do with mHealth –You can see that by using both search approaches – keywords and subject headings – I find more results. Then I need to combine the keywords for Australia and the subject headings And now that each concept has one search that includes all parts, I can combine each of the inclusive searches for the concepts together with AND, to get my actual results.

Now I need to evaluate my search again, to decide if I’ve used all of the keywords I should include, and if my search has identified all of the necessary literature. There are more keywords I should include that I missed in my first searches – for example, I haven’t included terms identifying Torres Strait Islander peoples yet. This search is not final yet – I need to keep testing and developing it. It’s important to critically evaluate your search and continue to build it until you’re confident it’s finding all the results you need. There are other search techniques you can use to help you develop the right search for your review question, including using proximity searching or more complicated search logic to add concepts and keywords. You can find out more about proximity searching in this video. All of these techniques help you to create a robust search for your systematic-style review

In this video we looked at using line searching and search history to help you build a robust search, and how to find and use subject headings in your search. You can apply these strategies to searches you do in many library databases - check each database’s help guide or ask a librarian for help. Good luck with your searching!