Has a Systematic Review Been Done on Your Topic?

Before you begin the process of developing a systematic review, you need to determine if a systematic review been done on your topic.

- Is it identical to your proposed topic?
- How current is it?

The number of completed SRs has increased dramatically over the past few years so don’t be discouraged as you begin searching the literature for prior SRs. You may very well find a systematic review that is similar to yours, but your focus might include a different aspect of the topic. The prior SR may have included only clinical trials and you intend to review case-control studies or it may have included subjects over 50 but you want to look at populations younger than 30.

Another key consideration is the currency of prior SRs you find as even those that are only a few years old can be out of date. In some cases, an SR can be out of date in only a year, especially if a new treatment or diagnostic method for a disease or condition has come into use.

Therefore, even if you find SRs on your topic, be sure to look at them to make certain your topic really isn’t taken. If your topic is taken, look at their conclusions. What do they feel is missing from their review? What are their recommendations for follow-up reviews? Is it something that you can do?

For this handbook, the starting topic will be:

How can patient compliance for treatment of latent tuberculosis be improved?  Inclusion criteria include: English language, and multiple research methodologies including clinical trials, evaluation studies, pre-post design, and case-control studies.

Strategy for locating previously completed SRs

This handout will provide guidelines for searching for previously completed systematic reviews. It is designed to be as efficient and as thorough as possible so that you shouldn’t have to look in too many places. Rather, the search strategy focuses on a few key resources that encompass other important sites.
Step 1: Search Ovid Medline

Go to the SPH Library Web Site.
http://www.sph.uth.tmc.edu/library
Under Selected databases... choose Ovid Medline to start.

Check the boxes next to **Ovid MEDLINE 1948 to [current week]**, **Ovid MEDLINE In-Process & Other Non-Indexed Citations**, and **Ovid OLDMEDLINE**. Click **Select Resources**.

Ovid Medline indexes **journal** articles only. The date 1948 refers to the date the database started, not the date of articles found in the database. Why so far back? You need to know if there is an earlier SR or other major critical literature review, even one from the 1940’s or 1950’s.

Once you’ve seen what has been done and the conclusions that were reached, you can then be prepared to discuss your results in context of their findings.

Retrieve systematic review search strategy

Use **<Alt> tab** to go back to the Library home page.

What is **<Alt> tab**? **<Alt> tab** allows you to move easily between windows without having to minimize one to get to the other. Hold down the **<Alt>** and tap **tab**. Don’t let go of the **<Alt>** key! You can move through all of your open windows by tapping **tab**.

Under **Browse e-Resources**, select **Internet Resources**.

Scroll down and select:

**Search Filters for Ovid Medline, Ovid PsycINFO, and PubMed**.

These search filters have been developed to help you locate specific types of study methodologies, such as systematic reviews, clinical trials, qualitative research methods, etc. By incorporating them into your search strategy, you are able to filter out the articles that do not include the study type in which you are interested.
Click on Filters for Ovid Medline. You will need to copy and paste the strategy for systematic reviews into your Ovid search, then add your terms.

Three review search strategies have been developed to locate reviews of different types.

The first strategy is designed to locate systematic reviews regardless of what they were called (SRs have not have always been labeled as such). The search uses a “shotgun” approach; it is deliberately very broad to ensure that all potential SRs are found. It will also find many false positives, but combining with other terms reduce those numbers. It also uses a specific vocabulary called MeSH (Medical Subject Headings) as well as keyword searches that look only in the title and abstract fields of Medline records.

The second strategy is designed to locate only Cochrane reviews in the Medline database.

The third strategy looks for a specific publication type as defined by Medline—reviews. Not all reviews are systematic and not all systematic reviews are assigned a publication type of review. However, it may be helpful to use this strategy after you have looked at the SRs. A descriptive literature review can still be very beneficial to the research process, especially as you develop your introduction section.

Highlight and copy the suggested terms for systematic reviews or meta-analyses (in purple).

Develop Ovid Medline search strategy

Use <Alt> Tab to go back to Ovid Medline and paste the terms into the search box. Click Search.

Don’t limit your search to full text. This restricts access to a very limited number of journals that are available through Ovid, not the full range of titles accessible through the SPH Library.

The SR search strategy retrieved over 97,000 records. Limiting to English reduces the number to 90,004. Something to consider: Review all SR abstracts on your topic as they are all in English just in case.
The next step is to search for latent tuberculosis. To do so, type in the single term “latent tuberculosis” into the search box. The box next to Map Term to Subject Heading is by default checked and only one term was entered. Consequently, Ovid will map the term to the most appropriate subject headings, also known as MeSH (Medical Subject Headings).

Mapping ensures that the terms selected are the correct terms. Why didn’t the long SR search strategy map? Because more than one term was entered. Ovid can’t map if the search entered includes “or”, “and”, or “not”.

To select terms, check the boxes to the left of “Tuberculosis”, “Tuberculosis, Pulmonary”, and “Antitubercular Agents”.

To the right of the terms is a column labeled “Explode”. Explode finds the narrower terms as well as the broad term.

To understand this concept, think of Fruit. Fruit is a broad term encompassing oranges, apples, cherries, watermelons, etc. If you do a search on just the broad term (Fruit), you may not find articles that are on the narrower topic of Apples or Oranges. Exploding Fruit will retrieve not only those articles with the MeSH heading of Fruit, but also Apples, Oranges, Lemons, Cherries, and so forth.

In this case, we don’t want all variations of tuberculosis (bovine, skin, etc.) so the broader term (Tuberculosis) is selected but not exploded. However, the specific type (Tuberculosis, Pulmonary) is both selected and exploded as is Antitubercular Agents. To explode these terms, check the first box to the right of the each term (under Explode).

Check the box toward the top of the page to Include all Subheadings, then Continue.

What are subheadings? These are categories that each topic is broken down into. For example, Tuberculosis has subheadings for Drug Therapy, Epidemiology, and Prevention & Control, among others. In this case, we will select all subheadings and not try to second-guess which are most appropriate.
Over 129,700 records were returned covering the tuberculosis terms. It’s important to look for keywords as well, though. A search was added for *tuberculosis.ti,ab.* which looks for the term “tuberculosis” in the title and abstract fields of records. Over 119,480 were found using that term.

Click on the boxes to the left of the search concepts to be combined, then click the **Or** button below the search history. This results in over 172,480 records. How do you know which button to click? **AND** is used to combine *concepts; OR* is used to combine *synonymous terms.*

The next step is to focus on the latent aspect of the TB search. Enter: *(ltbi or latent).ti,ab.* into the search box just as was done on the previous page. This will limit the search to the title and abstract fields only.

Why doesn’t this map to the subject headings? Remember— anytime you use **OR** or **AND** in a search, the terms cannot be mapped in Ovid.

Use **AND** to combine the results of the search on line 5 and line 6 to find the articles that include both the TB *concept* and the latent *concept.* This results in **2,090** items returned (line 7).

The next step is to search for the Latent Tuberculosis term. This is a very new MeSH term so only 51 items are returned.

Combining the results of the search on line 7 (TB + latent) and line 8 (just Latent TB) retrieves **2,097** articles.

Finally! We are now ready to take the large search on latent tuberculosis and find out how many of the items retrieved are potentially systematic reviews.

Line **10** shows the results for latent TB SR articles in any language— **47** were found.

Line **11** shows the results of combining the English language SR items with the latent TB search— **42** items were found.
Why was “adherence” or “patient compliance” not added to the search strategy if that is what the research question was? Adherence terminology is very tricky as it can be referred to in the literature many ways. When looking for prior reviews, focus on the main topic rather than the specifics of the topic. Generally speaking, the number of reviews will be very low; it shouldn’t take much time to look through them all.

The search can even be broadened by looking at all review articles. To do so, run a search for: review.pt. and 9. The number is still fairly low—less than 382 in all languages.

Don’t have the patience to review that many? A quick search of compliance terms does greatly reduce the number but... It’s better to be safe than sorry when it comes to systematic reviews. Review the larger number to ensure you are being thorough.

**Save your search**

Ovid will let you set up an account and save your search strategies to review later, edit, copy, etc..

Above the **Search History** is a link to **Personal Account**. Click that and select **Create a new Personal Account**. Be sure your username and password are easy to remember. Do you have a RefWorks account? Why not use the same username and password?

Below the **Search History** is a button to save the search history. When saving it, be sure you give it a name that will remind as to what the search was. In the comment box, indicate which database and the date you searched. Click **Save**.

**Does your topic involve a psychological/behavioral sciences perspective?**

If so, consider running a parallel search in PsycINFO. You will need to use a different set of terms for systematic reviews (see the Library page with the filters). You will also need to modify the other terms you use as PsycINFO uses a vocabulary developed by the American Psychology Association which differs from MeSH.

Consider this good practice for your actual SR; you’ll need to search this database anyway so why not give it a try now?
Interlibrary Loans for articles not available online or in print

Each citation in Ovid Medline has a button next to it to search for the full text access. This search engine will report on both print and electronic access available through the SPH Library.

What if you find an article during your searches that you want but is not available through the SPH Library?

As extensive as the online collection is, not everything is available electronically! You have the option to **Step 2—Search the Library Catalog** which searches 4 medical libraries in Houston and one in Galveston.

If you find the item at another library in the Texas Medical Center, you also have the option of going to the library and copying it (not required).

If it is not available or you are unable to go to another library, use **Step 3—If no catalog results: Submit an Interlibrary Loan Request**.

**Note:** Set up an ILL account **before** submitting a request (**SPH Library—> Book/Article Request**). Create an account using an easy to remember username and password—maybe the same as your Ovid account?

Doing this first ensures that the information will be pushed through to the ILL form, i.e. the form will be automatically completed for you!

There are 2 fields in which you may want to add information.

**Not Wanted After Date:** Are you in a big hurry? Tell us!

**Notes:** If there is something we need to know, put it in this field.

Your article will be delivered electronically to your ILL account. You will receive an email when the article is available for you to download.

**Note:** There is no cost to you to request items. However, the SPH Library is often charged by other libraries for ILL requests. These charges are generally $9 to $20. Please, request only if you really need the article!
If you do not find a review in Medline, does this mean none exist? Not necessarily! There are a few other databases to check. After all, Medline covers only the journal literature; there may be something in the grey literature (i.e. not a journal article).

In the case of the latent TB topic, the aims need to be modified since a recent review was found covering the US and Canada:

**How can patient compliance for treatment of latent tuberculosis in developing countries be improved?** Inclusion criteria include: English language and multiple research methodologies including clinical trials, evaluation studies, pre-post design, and case-control studies.

### Step 2: Search the TRIP Database

Use `<Alt>` tab to go back to the databases page.

Click on T.

Scroll down to the TRIP database and click on it.

What is the TRIP database? TRIP is an evidence-based medicine database that pulls from a large variety of sources.

A complete list can be found at: [http://www.tripdatabase.com/publications](http://www.tripdatabase.com/publications)

Searching TRIP will retrieve article citations, but it will also retrieve government reports from groups such as AHRQ (Agency for Healthcare Research & Quality) and the NHS (National Health Service).
The search engine is not as sophisticated as the Ovid interface—no matter. It will support **AND** and **OR**.

Each item is color-coded to indicate the type of item it is based on the TRIP classification.

To the right of the search results is a key to the color-coding hierarchy of evidence as well as a filter that allows you to select items by publication type.

Clicking on the **green** block will retrieve all of those items that have the highest level of evidence according to TRIP—evidence-based synopses, systematic reviews, and guidelines.

You can move the **purple** block to the left to remove items or click on a specific publication type to retrieve only those kinds of articles. One other feature is that you can also select those articles they have deemed suitable for the developing world.

Notice that in this example, there are 6 evidence based synopses, 34 SRs and multiple guidelines.

Selecting just the systematic reviews retrieves the list seen on the right.

Notice that number 6 is a treatment compliance study—but what is the emphasis in this study?

In this particular case, this study looked at the economics of LTBI treatment compliance, not the means by which compliance can be improved or enhanced.

Is this really a systematic review? It doesn’t appear to be. As indicated by the title, it’s really a randomized trial.

What’s nice, though is that TRIP links to this particular database which has very nice descriptions of studies.
Below is an example of a quick search on “health promotion and obesity”. As you can see from the results, TRIP has identified 21 evidence-based synopses and 85 systematic reviews. (This wasn’t even a very good search either!) Many of the SRs come from DARE—Database of Abstracts of Reviews of Effects. These are from journals so a decent search of Medline should retrieve them. Searching TRIP helps to verify that your search is complete, though.

The first item is actually a report that would not be picked up by Medline, though. It’s a report from the EPPI Centre which is part of the University of London. It would be considered to be part of the grey literature, i.e. it’s not a journal article. Will you use non-journal reports/studies in your systematic review? Think about that as you review some of the items you find through TRIP.

**Step 3: What other database are appropriate to search?**

Depending on the topic, two additional databases should absolutely be considered:

- **Behavioral Sciences:** PsycLIT (Ovid);
- **Nursing:** CINAHL* - Cumulative Index to Nursing & Allied Health (Ebsco).

The SPH Library has hundreds of links available from the A-Z page; select titles are listed below.

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<thead>
<tr>
<th>Academic Search Complete*</th>
<th>African Index Medicus</th>
<th>Agricola (Nutrition)</th>
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<tbody>
<tr>
<td>Alcohol &amp; Alcohol Problems Database</td>
<td>Alcohol Studies Database</td>
<td>Alt-Health Watch*</td>
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<tr>
<td>CCInfoWeb (occ/env hlth)</td>
<td>Digital Dissertations</td>
<td>Environmental Universe</td>
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<tr>
<td>ERIC (Ebsco) (education)*</td>
<td>Grey Literature Collection</td>
<td>POPLINE</td>
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<tr>
<td>Rand Corporation (multiple subj)</td>
<td>RePEc (economics)</td>
<td>Resource Guide for PH Preparedness</td>
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Many of these have very simple search engines so you cannot do a search using a complex search such as the one in Ovid Medline.

*The following search strategy will work on all Ebsco (starred) databases. Copy and paste the search on the first line, then add your topic on the second line.

“systematic review” or “meta-analysis” or “systematic literature” or “research synthesis” or “research integration” or “information synthesis” or “data synthesis” or “data extraction”

**Questions?**

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