UTS Library’s Guide to Finding Evidence-Based Practice Resources

UTS Library’s Health librarians have made this step-by-step guide to finding evidence-based practice resources using the PICO search framework. This guide complements the Library’s PICO workshops. If you have any questions, use the Ask a Librarian page on the UTS Library website.
Contents

Unpacking your question ....................................................... 003
MeSH terms ......................................................................................................... 005
Which database should I use? ................................................ 007
  To find Randomised Controlled Trials ................. 007
  To find Systematic Reviews ............................................. 008
  To find Clinical Practice Guidelines ................. 008
Searching in Medline (Ovid) .................................................... 009
Searching in CINAHL ................................................................. 020
Unpacking your Question

The first thing you need to do is break down your scenario into the PICO framework.

PICO stands for:

P = Population or Problem
I = Intervention
C = Comparison
O = Outcome
UNPACKING YOUR QUESTION

EXAMPLE SCENARIO: NOCTURNAL ENURESIS

You are a recently graduated RN working with a child health nurse. One of her patients is five-year-old Sam, who suffers from nocturnal enuresis. His parents say it is a constant problem and is becoming more difficult now that Sam is being invited for sleep-overs. The conventional therapies include medication such as desmopressin (an antidiuretic hormone) or arginine vasopressin (both of which decrease night-time urine production), and enuresis alarms. His parents are unconvinced about the safety of Sam taking ‘drugs’ and want to try using a bed-wetting alarm. You decide to find out which treatment is more effective by doing a search to find the evidence.

This is what your PICO breakdown would look like in this scenario:

P = Five-year-old child suffering from nocturnal enuresis
I = Bed-wetting alarm
C = Medications such as desmopressin or arginine vasopressin
O = No bed-wetting

Once you have broken down your question, you will next identify possible search terms to use in the database. To achieve the best results, you will need a mix of keywords and MeSH terms.

Keywords are the words or phrases you enter into databases to find resources that match what you are looking for, for example bed wetting or enuresis. It’s important to use keywords, as they can help you find results not covered by MeSH terms (more on that later). When you add keywords into a search, you ask the database to find all the results that include them in the text. To come up with keywords, you can start by looking in your textbooks or subject readings or search Google to find some examples (e.g. Thesaurus).
MeSH Terms

MeSH is an acronym that stands for *Medical Subject Headings*

MeSH terms describe what the article or report is about and they make it easier to find all the relevant information about a subject.

You can use the MeSH Browser to see if there is a heading to match your topic. Once you have found the MeSH terms, add them into your PICO table along with your keywords.

TIP

Include the American spelling of terms if applicable (e.g. labor or labour, organize or organise).
The keywords and MeSH headings for our example scenario would look like this:

<table>
<thead>
<tr>
<th>P</th>
<th>I</th>
<th>C</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nocturnal Enuresis (MeSH and keyword)</td>
<td>Bed wetting alarm (Keyword)</td>
<td>Deamino Arginine Vasopressin (MeSH)</td>
<td>No bed wetting (not to be entered)</td>
</tr>
<tr>
<td>Enuresis (MeSH)</td>
<td>Bedwetting alarm (keyword)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urinary Incontinence (MeSH and keyword)</td>
<td>Buzzer alarm (keyword)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bedwetting (keyword)</td>
<td>Enuresis alarm (keyword)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bed wetting (keyword)</td>
<td>Behavior therapy (MeSH)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Behaviour therapy (keyword)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We haven't added a keyword or MeSH term for child, because we can limit the search to Sam’s age group later. We’ve also put two forms of the word ‘bed wetting’ into our PICO table to ensure that we get results that use both spellings.
Which database should I use?

*That depends on what type of information you are looking for!*

Now that you have your MeSH terms and keywords ready, it’s time to start searching. To find a database to search in, go to the Library website and click on Find Databases. On the left hand side select Health, and then select Evidence Based Practice.

**TO FIND RANDOMISED CONTROLLED TRIALS:**

Clinical trials, such as Randomised Controlled trials, are often published as journal articles within specialist journals. Try these databases:

- **CINAHL (Cumulative Index of Nursing and Allied Health Literature)**
  Key database for nursing and allied health literature.

- **Medline**
  A very large journal database with an emphasis on medical literature.

- **Embase**
  Another very large journal database with an emphasis on pharmaceutical literature. Embase also contains more European publications.

There are other databases that you can search, but the ones above all have a specific limit to help you find Randomised Controlled Trials. The examples on the following pages explain more about this.
TO FIND SYSTEMATIC REVIEWS:

Systematic Reviews are sometimes published in journal articles, but there are some special and reputable databases which specialise in compiling and providing access to their systematic reviews. Try:

**Cochrane Library**
A collection of evidence based medical databases available for free to Australian residents.

**Evidence Based Resources (Joanna Briggs Institute)**
A collection of summarised and appraised evidence for healthcare practices including evidence summaries, best practice information sheets, systematic reviews, consumer information sheets, systematic review protocols, and technical reports.

**Medline**
A very large journal database with an emphasis on medical literature.

TO FIND CLINICAL PRACTICE GUIDELINES:

Clinical Practice Guidelines are not published in journals, so you won't find them in Medline or CINAHL. They are usually produced by hospitals or government departments for the purpose of providing clinical guidance for health professionals. They provide recommendations for practice based on specific evidence.

Clinical Practice Guidelines published by government departments tend to be freely available via the internet and there are some free databases which can help you search for them. Try:

**Netting the Evidence**
A Google custom-based search for evidence-based resources. You can search using your keywords and also including the publication type as a keyword to limit the search further.

Use Find Databases to see more Evidence Based Practice databases.
Searching in Medline (Ovid)

Medline’s default is the Advanced search mode, which has a Map term to subject heading check box already ticked. This function will take you to a list of suggested MeSH terms that you can include in your search. First type in Nocturnal enuresis and then select Search (Note Map term to subject heading).
This ‘maps’ to precisely what we typed in, and it is already ticked.
Next, tick the box for Include All Subheadings. Select Continue and again.
SEARCHING IN MEDLINE (OVID)

This retrieves 964 results and shows in our Search History:
Searching in Medline (Ovid)

Take each of the terms from your PICO table and search for them individually. This is the easiest way to clearly display your search history and will allow you to combine your terms later.

When you search for a keyword, type in the words and select Search. Select the last row which says search as keyword, and select Continue.

TIP

When searching for keywords, consider truncating (*) the word if there are different ending possibilities such as ‘Urinary incontinen*’ or to account for the differences in English and American spelling (e.g. ‘behavio*’ to search for behavior, behavioral or behaviour or behavioural).
Once you have searched for all your Population or Problem synonyms, select all the search lines and select **Combine with OR**.
SEARCHING IN MEDLINE (OVID)

This will retrieve a large number of results, because the search is looking for articles that use any of those terms. Now you will need to do the same for the Interventions, Comparison and Outcome (optional) parts of the table. Make sure you do each section before moving on to the next one.

TIP

When doing PICO searches, sometimes you may not use all of the sections. In this example, you do not need to include the Outcome section, because you will find the outcome when you read through the results.
Once you have entered all your terms and combined them with OR you then need to combine them with **AND**. Select the search line that represents each section of your PICO table (in this case it would be 7, 14 and 15) and select **Combine with AND**.

We now have 95 results:
Now we are going to limit by age group. To do this, select the last row which combines all your terms with AND, in this case 16, and select **Additional Limits**.
SEARCHING IN MEDLINE (OVID)

Under Age Group, select **All Child**. Under Publication Types, select **Randomized Controlled Trial**.

This is also the area where you can limit your search down to publication type if you want to, for example Randomised Controlled Trials or Systematic Reviews.
We retrieved 13 results, and all of them are Randomised Controlled Trials. Now, it's just a matter of finding the best one to answer our PICO question.
SEARCHING IN MEDLINE (OVID)

Scroll down to see your list of results, and you will also see a link that says SFX. SFX is a linking tool to check whether the full text article is available to be downloaded.

SAVING YOUR SEARCH

We highly recommend saving your search history as you will need to show evidence of your search strategy; it will also allow you to review or edit your searches.

To save your search history, create an account. Select My Account at the top right hand corner of the screen and follow the instructions.
Searching in CINAHL

Once you’re in the database, make sure the **Suggest Subject Terms** box is ticked. Then type in your first search term and select **Search**. The database will automatically try to match your search to related MeSH terms. Enter your first term ‘Nocturnal Enuresis’.

TIP

You only need to fill in the top box when searching and enter in your terms individually.
SEARCHING IN CINAHL

Select the subject heading and then select **Search Database**. You can do this for your remaining keywords and MeSH terms for your Population or Problem concept.

TIP

When searching keywords, consider truncating (*) the word if there are different ending possibilities such as 'Urinary incontinen*' or to account for the differences in English and American spelling (e.g. 'behavio*' to search for both 'behaviour' and 'behavior').
SEARCHING IN CINAHL

Once you have searched for all your Population or Problem synonyms with a combination of Subject Headings (indicated as ‘MH’) and Keywords, select all the search lines and select **Search with OR**. This will retrieve a very large number of results because it is looking for each term within the database.
Now we are ready to start searching for our second concept: “bed wetting alarm”.

[Search screen with terms and results]

Finding Evidence-Based Practice Resources
Next, search for further synonyms and repeat the same process until you have used all the terms in your table.

**TIP**

Don’t forget to include one and two word variations – such as ‘bedwetting’ and ‘bed wetting,’ as these will retrieve different results.
Then we can select the three combined sets and select **Search with AND**.
SEARCHING IN CINAHL

To limit your search, scroll down the page a little until you see where it says ‘refine results’ down the left column. To access the limits, which include Age groups and Randomised Control Trials, you need to select show more just below the Publication Date slider.

This will open a pop up window with lots of options.
Under **Publication Type** you can select **Systematic Reviews** and **Randomized Controlled Trials**. If you wish to select more than one, hold down the control key or command on a Mac.

Age Groups are towards the bottom on the right side. Scroll down and select **All Child**.

Once you have finished your selections, select **Search**. 

**SEARCHING IN CINAHL**
SEARCHING IN CINAHL

After limiting your search you can see you only get 1 result, but this systematic review is very relevant to the topic.

TIP

To save this for later, select the button to add it to your folder.
Because the search conducted was too narrow and did not achieve enough results you will need to alter it. To do this scroll back up to your Search History and try deleting line S15 ‘Desmopressin’ by checking the box beside it and selecting **Delete Searches**.

---

### SEARCHING IN CINAHL

<table>
<thead>
<tr>
<th>Search ID#</th>
<th>Search Terms</th>
<th>Search Options</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>S18</td>
<td>S7 AND S14 AND S15</td>
<td>Search modes - Boolean/Phrase</td>
<td>View Results (10)</td>
</tr>
<tr>
<td>S15</td>
<td>(MH &quot;Desmopressin&quot;)</td>
<td>Search modes - Boolean/Phrase</td>
<td>View Results (273)</td>
</tr>
<tr>
<td>S14</td>
<td>S8 OR S9 OR S10 OR S11 OR S12 OR S13</td>
<td>Search modes - Boolean/Phrase</td>
<td>View Results (5,490)</td>
</tr>
<tr>
<td>S13</td>
<td>&quot;behaviour therapy&quot;</td>
<td>Search modes - Boolean/Phrase</td>
<td>View Results (650)</td>
</tr>
<tr>
<td>S12</td>
<td>(MH &quot;Behavior Therapy&quot;)</td>
<td>Search modes - Boolean/Phrase</td>
<td>View Results (5,008)</td>
</tr>
<tr>
<td>S11</td>
<td>&quot;enuresis alarm&quot;</td>
<td>Search modes - Boolean/Phrase</td>
<td>View Results (10)</td>
</tr>
<tr>
<td>S10</td>
<td>&quot;buzzer alarm&quot;</td>
<td>Search modes - Boolean/Phrase</td>
<td>View Results (9)</td>
</tr>
<tr>
<td>S9</td>
<td>&quot;bedwetting alarm&quot;</td>
<td>Search modes - Boolean/Phrase</td>
<td>View Results (9)</td>
</tr>
<tr>
<td>S8</td>
<td>&quot;bed wetting&quot;</td>
<td>Search modes - Boolean/Phrase</td>
<td>View Results (9)</td>
</tr>
<tr>
<td>S7</td>
<td>S1 OR S2 OR S3 OR S4 OR S5 OR S6</td>
<td>Search modes - Boolean/Phrase</td>
<td>View Results (7,579)</td>
</tr>
<tr>
<td>S6</td>
<td>&quot;bed wetting&quot;</td>
<td>Search modes - Boolean/Phrase</td>
<td>View Results (9)</td>
</tr>
</tbody>
</table>
Now select S7 and S14 and **Search with AND**.
And again limit it to All Child and both Systematic Reviews and Randomised Controlled Trials.

This time we found 5 results!
SEARCHING IN CINAHL

You can check whether there is an abstract available for each result if you hover your mouse over the symbol. Sometimes the articles will be available in full text from the database, but mostly they will not. You can usually select the SFX symbol to find the full text via another database. A pop up screen will indicate whether Full text is available somewhere else. In most cases, if you click on a Full text available via link it will take you directly to the article.

You can now choose which results to add into your folder. To view your selections, click Folder View under Folder has items on the right side of the screen. Alternatively, go to the very top of the page and click on where it says ‘Folder’. A list of your selections will appear. From this screen you can save, print, email or export your results to RefWorks or EndNote.
SEARCHING IN CINAHL

SAVING YOUR SEARCH

If you want to keep your search for a later occasion, you can set up a personal account in EBSCO – select where it says Sign in at the top of the page, and select Create a new account.

If you can’t find enough results in CINAHL, don’t worry, as you can try other databases such as Medline or Embase to find your Randomised Controlled Trials.
Help

For more help and tutorials:

Finding Evidence-Based Practice Resources Study Guide
These guides are designed to help you find evidence-based practice resources

HeadsUp
Online learning modules to assist you with a wide range of topics, including referencing and finding information

UTS Library on YouTube
Visit our YouTube channel to find videos explaining how to navigate databases and find information

Ask a Librarian
Find out all the ways you can get in touch with us, including in-person, online chat, email and more!