Exercise #1: Keyword/Boolean Searching and Filters

1. Open a browser and go to the Finding Articles and More tab of the Library Guide for today’s session: guides.lib.berkeley.edu/publichealth/hcop/articles

2. Click the PubMed link

3. Type: *(poverty OR income) AND health status* into the search box and click Search (or hit Enter). How many citations did you retrieve? (Should be over 29,000!)

   - At the middle right side of the page (scroll down a bit), is the Search details box. This is how PubMed translated your query. (NOTE: More about MeSH in Ex. 2 & 3.)

4. Near the top left side of the screen, click the Show additional filters link.

   - Using filters is a good way to get fewer articles.

5. In the box that appears, select (check) Languages and Search fields. Click Show.

6. Select the following filters - one at a time - by clicking the links on the left side. (NOTE: You will need to wait a few seconds for the screen to refresh after each selection):

   - Under Species choose Humans (*remember to wait for the screen to refresh…*)
   - Under Languages select English
   - Under Search Fields click Choose . . . then, select Title (near the bottom of the dropdown list that appears). Click Apply.

7. How many items did you retrieve? (Should be about 100: More than a 99% reduction from the original set!).

8. Scroll down to the Search details box to see how PubMed translated this query. Note that when you force PubMed search for your terms only as article title words, it no longer “maps” (or translates) those terms to MeSH terms.

   - Most scientific article databases have limits (publication date, search field, language, etc.) you can use to focus your search.

9. Scroll up to almost the top of the screen and click Clear all to the right of Filters Activated. This will deactivate the Limits in preparation for Exercise 2.

   ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ End of Exercise 1 ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
**Exercise #2: Using Medical Subject Headings (MeSH) Terms**

1. Click the **Advanced** link, below the Search box.

2. Scroll down a bit to **History**, where you will see searches you have done today.

3. Re-run the last search you did – the one with about 100 results – by **clicking on the number under the Items found column** (NOT the # number under the **Search** column).

4. From the search results, check the box to the left of any three citations.

5. Scroll back up to the top, and:
   a. Click the **Summary** link (under and to the left of the Search box),
   b. Select **Abstract**.

6. Scroll down and click the **MeSH Terms** link for one of these citations. (It may say “Publication Types, MeSH Terms, …”)
   
   ➢ Look at the MeSH terms for this article. Note that some MeSH terms have a slash (/) with a word after the slash (e.g. *Chronic Disease/epidemiology*); more about this in Ex. 3.

7. Look for a **Mesh major term** (*MeSH Term with * after it*), and **click on the term**:

8. A little box will open: click **Search in PubMed**. This runs a **new** PubMed search for only this term as a major MeSH term. (Notice the “tag” [MAJR] after the term in the PubMed search box).

9. Use your browser's **Back button** to return to your 3 citations.

10. **If there’s anything in the Search box at the top, click the** [x] (far right) to clear it.

11. Again, click the **MeSH Terms …** link for one of these citations.

12. Click a MeSH term and after the little box opens, click **Add to Search**: this adds the selected term to the Search box.

13. Scroll down and click on **another** MeSH term. Again click **Add to Search** in the little box.

14. Go back up to the search box: You should see the two MeSH terms in the search box separated by **AND**. Click **Search** to run the search.

   ➢ If you notice the **Filters activated**: link near the top, click **Clear all**.
   ➢ Keep this search results page on your screen for Exercise 3.

~~~~~~~~~~~~~~ End of Exercise 2 ~~~~~~~~~~~~~~
Exercise #3: Using Medical Subject Headings: (MeSH) Subheadings

1. On your search results screen, click the title of an article.
   - Clicking the title changes the display of a single citation to Abstract display.

2. Click the MeSH Terms link.

3. Click on one of the Mesh Terms.

4. After the little box opens, click Search in MeSH. This runs a search in the MeSH Database.
   - Note: If your MeSH Database search finds more than one MeSH term, you will see a list of terms with their definitions.
   - If more than one term appears here, click on a single MeSH term.

5. Scroll down to see the definition, subheadings (usually), other selections, and the MeSH "tree(s)" (hierarchy/ies) where this term is found. Your term will have broader terms and may have narrower terms.
   - Note: Any word in the definition in UPPER CASE is itself another MeSH term.

6. Click the Subheadings: link. You will see definitions for all the Subheadings (Subheadings are also called “Qualifiers”).
   - Using subheadings/qualifiers will result in a more focused search of your MeSH term.

7. Use your browser's Back button to return to the MeSH record.

8. Click in the box to the left of one of the subheadings to start building your search.

9. Scroll down a bit and check the box next to Restrict to MeSH Major Topic.

10. Scroll up and click the Add to search builder button (near the top right). Your MeSH term and subheading will appear in the box.

11. Click the Search PubMed button below this box to run a search using your MeSH term. Make sure you have cleared and filters activated on the search results screen.

   “Extra Credit” Use your browser’s Back button to return to the MeSH database. Enter another term in the Search box. Select this MeSH term, then Add to search builder. Search PubMed using the two terms that appear.

~~~~~~~~~~~~~~~ End of Exercise 3 ~~~~~~~~~~~~~~~
Exercise #4: Working With Your Search Results

1. In PubMed, click on the Advanced link. Under Search History, you will see the searches you have done today. Re-run any of the searches by clicking on the number under the Result column (NOT the # number under the Search column).

2. Click the Sort by … link (below the search box) change Sort by to Publication date.

   - Changing the sort is sometimes useful when viewing a search result. PubMed’s default sort is by relevance.

3. Click in the box to the left of any 3 citations.

4. Use the Send to drop down menu link, just under the Search box, select Clipboard, then click the Add 3 items button that appears.

5. Note the Clipboard: 3 items link near the top right of the PubMed window.

   Also, a note appears above the search results confirming how many items were sent to the Clipboard.

   - Note: The Clipboard icon and the [number] items link are only visible on a search results page. However, a clipboard link also appears under Search History in Advanced Search, as well as at the bottom of the PubMed Home Page.

   - At the bottom of each citation you sent to Clipboard appears the text (in orange), “Item in clipboard” to help you keep track of citations you already sent to clipboard.

6. Click the Clipboard: 3 items link.

7. Click on an article title. To the right of the abstract is the Related citations in PubMed box.

   - PubMed generally displays 3 related citations plus 2 related review articles in this box. Mouse over the citations in this box to see a more complete citation.

8. Click the See all… link at the bottom right of the Related citations box. PubMed will now display citations related to your article in relevance order, starting with your original citation.

9. Click in the left box of two new citations.

10. Use the Send to menu link to select E-mail.

11. In the Format menu, choose Abstract (or Abstract (text) if you want a plain text e-mail).

12. Enter your e-mail address in the appropriate box, complete the anti-spam text, then click the E-mail button.

   ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ End of Exercise 4 ~ ~ ~ ~ ~ ~ ~ ~ ~ ~