

Your policy brief should be based on analysis informed by high-quality data and evidence, which can be sourced from published studies as well as unpublished authoritative reports and local data. This summary provides guidelines and tips for your literature and data search.

Search tips

Search terms

- Strike a balance between casting a wide net and not casting the net too wide. Search terms that are not specific enough will return too many unrelated journal articles from your search, while those that are too specific may omit some articles from your search results that could be relevant.
- If your search generates too few results, try using fewer search terms. You can also try alternate terms (different spellings, use of plurals, full name/abbreviations, etc.).
- If your search generates too many results, or irrelevant results, try using more terms or more specific terms.

Boolean logic

- Boolean logic uses the operators “AND” and “OR” to generate results from search terms inputted.
- Boolean operators are processed from left to right, just as in algebra.
- Most search engines, including PubMed, assume that when you type a string of search terms you want results that contain ALL of those terms (i.e. assume the AND operator)
- You can use parentheses to refine your search results.
- Example: “Salmonella AND (hamburger OR eggs)” will identify articles containing the words salmonella and hamburger as well as articles containing the words salmonella and eggs.

Sources of data

Published data can be identified using bibliographic databases such as PubMed or Google Scholar.

- **Single studies** report on one set of data collection and analysis.
- **Systematic reviews, or meta-analyses**, are many studies analyzed together in a single report to produce a combined assessment. Because they represent a combination of studies, a meta-analysis is frequently viewed as providing stronger evidence than a single study.

Unpublished data can be identified using search engines or through consulting with relevant authorities or experts. Examples include:

- **Authoritative reports**
 - Government public health institutions (MMWR, ministry annual reports of vital statistics, routinely collected health data)
 - International organizations (WHO, UNAIDS, UNICEF), NGOs
 - Medical associations
- **Local data**
 - Health services utilization data
 - Clinic data
 - Hospital discharge data
 - Electronic medical records
 - Population-based surveys
 - Vital statistics
 - Surveillance data or disease registries
 - Census data
 - Community / civil society data
 - Qualitative data

Tips for using PubMed

Sorting and filtering: Use the “sort by” function on the search page to search by date, quality of match to search terms, author, journal, etc. The filters on the upper left-hand side of the page allow you to sort by article type; there is a link at the bottom of the menu that allows you to select additional filters.

Finding full-text articles: When you click on an article in your search results you can view the abstract. You can then click on “full text links” to access the full article. These links will usually take you to a full-text version of the article, but not to the PDF. There is often an option to download the PDF from the full-text page

Tips for using Google Scholar

Google Scholar is a part of Google. However, instead of searching the whole internet, Google Scholar allows you to broadly search for scientific literature. You can find journal articles, theses, books and abstracts from academic publishers, professional societies, online repositories, universities and other websites. Often, articles on Google Scholar are free to download, even when they are not free via PubMed.

- Use quote marks to search for all words of a phrase together (e.g. “Papua New Guinea”).
- Use UPPERCASE for Boolean terms (AND, OR).
- On the right, you can see where free PDFs are available.
- When you find an article you want to cite, you can simply click the quotation icon under the article to copy the citation in common formats.
- To find newer articles, use sorting or filtering options in the left sidebar.
 - Click “since year” to show recently published papers.
 - Click “sort by date” to show just the new additions, sorted by date.
- Click the envelope icon (“create alert”) to have new results periodically delivered by email.

Finding full-text articles

Many journal articles are not freely available as open-access downloads. You can try these strategies to access articles:

- Check Google Scholar, which often has a PDF version.
- Check WHO/HINARI open-access scheme: <http://www.who.int/hinari/en/>
- Other open repositories
 - Médecins Sans Frontières (MSF): <http://fieldresearch.msf.org/msf/handle/10144/10833>
 - Research Gate: <http://www.researchgate.net/>
 - Academia: <https://www.academia.edu/>
- Email the corresponding author.
- Work with your mentor.