

SUMSearch and PubMed: 2 Internet-based evidence-based medicine tools

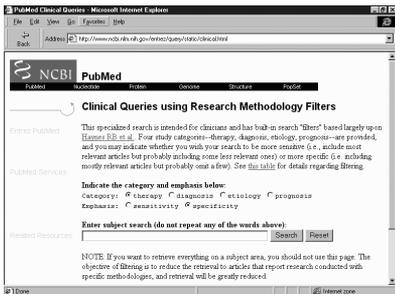


Figure 1. SUMSearch.

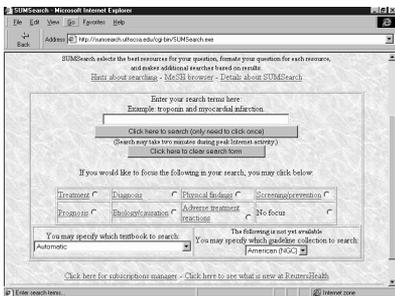


Figure 2. Pub Med.

This resource review evaluates SUMSearch (formerly SmartSearch) (Figure 1), which was developed by Robert Badgett and internal medicine colleagues at the University of Texas Health Sciences Center at San Antonio, and the U.S. National Library of Medicine's PubMed MEDLINE interface. In evaluating these tools we considered the following clinical scenario:

A middle-aged, otherwise-healthy businessman presents with flu symptoms. Having listened to the debate around the new antiviral drugs for influenza you conduct a "quick and clean" search for the treatment of influenza with zanamivir.

PubMed (Figure 2) is a free Internet interface to the MEDLINE biomedical database for clinicians from all health care disciplines and allows them to search using basic or advanced techniques, or clinical queries. SUMSearch allows "metasearching" (searching multiple sources) and augments PubMed access with such sources as the Database of Abstracts of Reviews of Effectiveness (DARE), the Merck Manual, and the U.S. National Guidelines Clearinghouse. It also can invoke search filters for tions about therapy and diagnosis for example.

PubMed allows field-specific searching (e.g., publication type), use of Boolean operators ("AND," "OR"), review of the search strategy, iterative refinement of the number of hits, and access to a hierarchical MeSH browser (currently under development). It also provides linkages to "Related Articles" that can be very useful. In "Clinical Queries" mode, searchers can choose to maximise sensitivity (for greatest number of hits) or specificity (for most focused set of hits) for searches on therapy, diagnosis, prognosis, or etiology. The filters used for these focused searches can be reviewed. In addition to MEDLINE, PubMed also includes PreMEDLINE (citations not fully indexed), providing fast-track access to core journal records in advance of a full MEDLINE entry. These lack full MeSH terminology so they require free-text searching.

The strength of SUMSearch is its resources but the searcher cannot see the search unfold. Further, the value of using MEDLINE filters for searching full-text sources is unproven. For this reason, the discriminatory power of the different filters used on this site seems poor. Additionally, its MeSH browser is of limited use for nonindexed terms such as zanamivir. A useful feature is its ability to present results in an abbreviated display according to publication type and source. Neither PubMed nor SUMSearch provides critical appraisal of the evidence retrieved.

Both databases were searched using "influenza AND zanamivir," and we noted the number of clinical trials and systematic reviews amongst the total retrieved items. References were then reviewed for clinical usefulness. Both databases retrieved clinically useful articles for issues of therapy but with SUMSearch we found a larger number of relevant diagnosis articles. The clinical usefulness of these databases is limited by the fact that, in most cases, only abstracts are provided and often a full-text article is needed to answer clinical questions.

Both PubMed and SUMSearch are applicable to a "quick search" scenario. Their trade-off is sophistication of features versus breadth of coverage. We think that SUMSearch is probably more useful for retrieving information from reviews and guidelines, and PubMed is more useful for obtaining information from original studies.

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SUMSearch is available at
<http://sumsearch.uthscsa.edu/searchform45.htm>.

PubMed is available at
<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>.

Ratings:

	Methods	Clinical usefulness
PubMed	★★★★☆	★★★★☆
SUMSearch	★★★☆☆	★★★☆☆