



Evidence-based health care and the Internet

Billions of bytes of health-related material are available via the Internet, but quantity is no substitute for quality. Because anyone can act as author, editor and Web publisher, much of the available information is shoddy, inaccurate and misleading. In a world of evidence-based health care, we need ways to evaluate the quality of this information.

The evidence-based approach means that after a clinical or research question is asked, a literature search must be conducted and a critical appraisal of the search results completed. It is possible to conduct a similar search via the Internet, but strategies are needed to search the Web and then to appraise the information found there.

Search strategies for finding clinical information on health care databases have been developed.^{1,2} However, even though it may seem easy to find information during an Internet search, it can be difficult, if not impossible, to find an answer to a spe-

cific clinical or research question.

Think of the Internet as a library with several hundred floors of books. Not only does this mean that searches can be complex, but they can also be difficult because the same search strategy may result in different retrievals when different search engines are used. The *JAMA* series "User guides to the medical literature" has dealt with ways to appraise information from traditional types of publications,³ but it is more difficult to rate Web sites. Jadad and Gagliardi identified rating instruments that evaluate Web sites that provide health information and concluded that although it is possible to evaluate the information with existing instruments, current tools are incomplete.⁴

The final steps of the evidence-based approach ask health care professionals to decide if they will change their practice based on the information they have appraised. Current practices will change only if the health care professional is confident that the best possible information found is sound.

Although the Internet can be difficult to search, some basic princi-

ples can be followed. When searching for information, follow the same steps used to search bibliographic databases (see sidebar). When assessing the quality of information on the Web, Silberg points to 4 standard areas. These evaluate information about:⁵

- Authorship: Have authors and contributors provided their affiliations and credentials?
- Disclosure: Has Web site ownership been disclosed, as well as sponsorship, advertising, underwriting, commercial funding or conflicts of interest?
- Attribution: Are references/sources clearly listed and copyright information noted?
- Currency: When was the information created and last updated?

Wyatt suggests that in addition to Silberg's criteria, the material's readability should be considered and the impact on education, clinical practice and patient outcome should be evaluated.⁶ For clinical studies and research published on the Web, principles outlined in the *JAMA* series can be used, but health care professionals should remember that journals and textbooks are still considered the primary sources for information. — *Jessie McGowan*, reference librarian, CMA

Steps in developing a research strategy

- Develop a clinical or research question, keeping in mind the patient, the intervention or exposure, and the outcome.
- Use more than 1 search engine (such as Alta Vista) and subject tree (such as Yahoo!).
- Define the search strategy by breaking the question into elements that can be searched separately or in combination.
- To broaden the search retrieval and allow for variations in word use, determine possible synonyms.
- Use AND to retrieve records containing both terms selected, use OR to retrieve records containing either term and use NOT to eliminate records with certain terms.
- Remember that most search engines will let you limit date ranges.
- Run and revise the search strategy as needed, and consult a librarian for assistance if needed.

References

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