



EVIDENCE-BASED MEDICINE WEB SITE

TO THE EDITOR:

The Internet offers many directories specifically designed for clinicians seeking medical information. However, most such directories do not provide assessment based on objective criteria. Many do not even describe the content of the proposed sites. To facilitate access to high-quality medical information on the Internet, we created a directory of critically evaluated Web sites that claim or appear to offer clinically oriented evidence-based medicine (EBM) content.

The methodology used to develop the directory was inspired by the one proposed for carrying out systematic reviews of medical literature.¹ Starting in March 1999, the Internet was searched monthly by means of the search engines Alta Vista, Infoseek, Yahoo, HotBot, Copernic, and, more recently, Google with the following key words in both French and English: "evidence-based medicine," "practice guidelines," and "critical appraisal." We also relied on retrieved sites for links to other Web sites ("snowballing"), on local medical publications and experts, and on our personal lists of retrieved Web sites. A Web site written in English or French was included if it offered at least 1 of the 4 following types of clinical EBM information: critical appraisal topics, sys-

tematic reviews, practice guidelines, or appraised links to other EBM Web sites. Each retrieved site was independently assessed by 2 evaluators. A third evaluator resolved any discrepancies.

Selected Web sites were independently assessed by 2 evaluators using a 17-item validated tool (score 0 to 100).² Eight criteria were related to content evaluation, including information retrieval and validity assessment; 9 criteria were related to design evaluation, including browsing and visual presentation. The mean score was calculated. If the ratings of either the content or the design of a site differed by more than 10%, the final score was reached by consensus. Each evaluator also provided structured qualitative comments about the site.

Among 242 sites retrieved as of September 2001, 112 met the selection criteria and were analyzed with the evaluation tool. Selected sites offered critical appraisals of original articles ($n = 23$), systematic reviews ($n = 29$), practice guidelines ($n = 54$), and directories of appraised links to other EBM sites ($n = 12$). Six sites each provided more than 1 category of EBM clinical information. Eighty-nine sites were in English only; 8 were in French; and 15 were totally or partially bilingual. Globally, the selected sites were found to be of good quality, with a mean score (\pm SD) of 75 ± 11 and a median score of 77. However, a wide variation was observed, with scores ranging from 39 to 96. Average score varied according to the 4 categories of EBM information offered, with the highest and lowest mean score attributed to the systematic review and practice guideline sites, respectively.

One would expect that Web sites advertising themselves as EBM sites would comply with the widely known principles of EBM³ and that they would provide reliable information. Our work showed that this was not necessarily the case. This finding supports the need for appraisal of Internet sites by either users or external bodies.⁴ To our knowledge, the Laval University Evidence-Based Medical Practice Web site (<http://www.medecine.quebec.qc.ca>) is the first to offer a directory of critically evaluated Web sites claiming or appearing to offer EBM. All information on the site is available in both French and English. The directory should facilitate access to high-quality information for practitioners dedicated to evidence-based care. Providing previously evaluated information to clinicians removes some of the barriers to EBM practice.^{5,6} We envision adding to our site self-learning modules on information mastery and EBM principles and a search engine providing access to the content of

ERRATA

A correction has been received from the authors of "Vaccine Schedules and Procedures, 2001" in the *JFP* supplement "Vaccines Across the Life Span, 2001" (October 2001, vol. 50, no. 10). In Table 4, page S40, under "Timing," the row that begins "4 to 6 years of age" should read: "If the third IPV [not "poliovirus vaccine"] dose is given on or after the fourth birthday [not "on or after the third birthday"], the fourth (booster) dose is not needed."

A correction has been received from Steven A. Dosh, MD, MS, author of "The Treatment of Adults With Essential Hypertension" (*JFP*, January 2002, vol. 51, no. 1). In Table 2 (page 76), doxazosin is described as an alpha agonist. It is an alpha blocker.

selected EBM Web sites through the use of clinical key words, incorporating automatic translation facilities (French–English). Our next step is to evaluate the best ways for access to this site to be incorporated into daily practice.

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REFERENCES

1. Mulrow CD, Cook D. Systematic reviews. Synthesis of best evidence for health care decisions. Philadelphia, Pa: American College of Physicians; 1998.
2. Frémont P, Labrecque M, Légaré F, Baillargeon L, Misson L. Assessment of medical Web sites: inter- and intra-observer reproducibility of a rating tool. *Can Fam Physician* 2001; 47:2270-8. French.
3. Sackett DL, Strauss SE, Richardson WS, Rosenberg W, Haynes RB. Evidence-based medicine. How to practice and teach EBM. 2nd ed. London, England: Churchill Livingstone; 2000.
4. Eysenbach G, Diepgen TL. Towards quality management of medical information on the Internet: evaluation, labelling, and filtering of information. *BMJ* 1998; 317:1496-502.
5. Guyatt GH, Meade MO, Jaeschke RZ, Cook DJ, Haynes RB. Practitioners of evidence based care. *BMJ* 2000; 320:954-5.
6. Straus SH, McAlister FA. Evidence-based medicine: a commentary on common criticisms. *Can Med Assoc J* 2000; 163:837-41.

LIQUID-BASED CERVICAL CYTOLOGY TESTS

TO THE EDITOR:

We recently published in *JFP* a meta-analysis of liquid-based cervical cytology (LBCC) tests.¹ Because these technologies are not identical, we tested the hypothesis that there is a difference between ThinPrep and other LBCC tests. We therefore repeat-

ed our analysis using only the 3 studies that compared both ThinPrep (TP) and conventional Pap smears with a reference standard.

In this repeat analysis the pooled sensitivity (0.81) and specificity (0.81) for ThinPrep were lower than in the combined analysis for all LBCC tests. However, the sensitivity and specificity for conventional Pap smear were also lower; the net difference in sensitivity between TP and conventional Pap smear is therefore only 1% greater than we initially reported. Unfortunately, the lack of an adequate reference standard in most of the existing studies does not allow for a true comparison of the 2 tests, and the studies with reference standards reveal relatively small differences that fail to reach statistical significance.

With new guidelines for treatment of ASC-US recommending triage with HPV DNA tests, the convenience of using the ThinPrep sample already obtained for reflex testing is an advantage. Use of the ThinPrep for repeat testing of women with ASC-US Pap tests to facilitate HPV testing is an option as well. More studies are needed to compare these new strategies with traditional approaches to the management of these patients.

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REFERENCE

1. Sulik SM, Kroeger K, Schultz JK, Brown JL, Becker LA, Grant WD. Are fluid-based cytologies superior to the conventional Papanicolaou test? A systematic review. *J Fam Pract* 2001; 50:1040-50.

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