Evidence-based medicine means MDs must develop new skills, attitudes, CMA conference told

Jill Rafuse

Résumé : La médecine fondée sur des preuves a de plus en plus d'influence sur la pratique clinique et l'éducation en médecine, mais elle exige des praticiens des compétences et des attitudes nouvelles. La 6e conférence annuelle sur le leadership de l'AMC a attiré plus de 275 participants dont les délibérations ont porté sur les avantages, les problèmes, les défis et les réussites de l'application à la pratique de la médecine de résultats de recherche pertinents. Un des principaux conférenciers, le Dr Gordon Guyatt, de l'Université McMaster, a décrit les principes du nouveau modèle et lancé les deux jours de discussions.

The growing influence of evidence-based medicine (EBM) on clinical practice and medical education represents a new approach to medicine that will force physicians to learn new skills, doctors attending the CMA's 6th annual Leadership Conference were told.

Dr. Gordon Guyatt, chairperson of the Evidence-Based Medicine Working Group at McMaster University, outlined the principles of the new model for more than 275 doctors attending the March 4–6 conference in Ottawa. He said EBM places less value on clinical experience, the study of physiologic principles, traditional medical training and common sense, instead shifting the emphasis to systematic observation, understanding of rules of evidence and critical interpretation of original literature. (EBM, which was described as a new approach to teaching the practice of medicine in the *Journal of the American Medical Association* [268: 2420–2425], is the subject of a five-part *CMAJ* series that began in the Apr. 15, 1994, issue and concludes June 15. — Ed.)

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Under EBM, said Guyatt, physicians will have to ask the right question and then know where to seek the answer. But before they can seek the answers they will need to know how to appraise the literature critically so they know which evidence is relevant and how much a physician should rely on it instead of intuition and judgement. EBM in no way devalues experience in certain applications, he added, but shows when clinical guidelines are and are not appropriate.

Doctors at the conference were interested in EBM and the growing volume of clinical practice guidelines but shared their frustrations about how to gain access to necessary information. Time-related pressures and concerns about the relevance of guidelines in real-life situations are just a few of the factors affecting the acceptance of evidence-based research in medical practice, they said.

Dr. Peter Vaughan, a family physician from Guelph, Ont., described the difficulties physicians face in finding current clinical information. Most don't have time to locate articles and assess the findings, so they are likely to be more influenced by drug companies than by medical literature, he said. Most physicians learn about medical discoveries the same way their patients do — through spotty and superficial information gleaned from the lay press.

Medline searches will not solve the problem, he said. Information systems are both poorly designed for individual practitioners and time consuming. Furthermore, when the rationale behind guidelines is not communicated convincingly, fundamental questions remain about their value and relevance. Current databases are inadequate for bringing current research and guidelines to frontline physicians. "I need better, more accessible information, when and where I need it," he concluded.

Doctors attending the conference asked many questions about physicians' need for evidence-based medicine. Some felt that EBM and the accompanying guidelines devalue experience, clinical judgement and, ultimately, the "art of medicine."

Doctors are also concerned about unrealistic expectations. When a patient arrives, physicians don't have time to search the literature for relevant research. And doctors who are far removed from hospital and

university facilities not only face practical difficulties in finding relevant literature, they have the added burden of convincing patients of the value of "diagnosis by scientific literature."

However, Guyatt maintained that even in busy practices physicians allocate time for continuing medical education (CME) courses and reviews of medical literature, and in the next 10 years the use of computers as CME aids will increase dramatically. "Currently it might be difficult in terms of efficiency, but these challenges will be met," he said.

Dr. Thomas Elmslie, an associate professor in the departments of Family Medicine and Community Medicine and Epidemiology at the University of Ottawa and scientific consultant to *CMAJ*, said physicians' attitudes and understanding of computer technology are barriers to acceptance of EBM.

However, medical students and their teachers appear to be enthusiastic about the EBM format. Since it was introduced to first- and second-year medical students at the University of Ottawa 3 years ago, Elmslie said, there has been a change in attitude among academic family physicians who are clinicians. As their students graduate and begin to practise, many in remote areas, they will be demanding quick and easy access to clinical research. Ultimately, he said, "the success of evidence-based medicine will be as much because of attitude as skills or technology."

Computers are increasingly common in medical practice, Elmslie said, but it is the growth of integrated international computer networks such as Internet that will allow doctors to gain access to central databanks without having to invest in data programs that would soon be outdated.

Several speakers said that even though EBM represents a marked shift for medicine, it should be seen as a complement, not impediment, to medical practice. Most physicians might need to search the literature only once or twice a week as specific questions arise, said Dr. Brian Haynes, professor in the Department of Clinical Epidemiology and Biostatistics at McMaster University. For urgent matters, they can still do what they've always done: seek the advice of a specialist or expert.

Although there is as yet no easy-to-use way to bring EBM to the office, hospital and the operating room, progress is being made. Information-retrieval systems are being improved and search strategies that yield the best articles on selected subjects are being developed.

Haynes cited several EBM resources. *Scientific American Medicine*, a medical textbook that is updated regularly, is available in compact-disk form as *Scientific American Magazine Consult*, which is updated quarterly. The *Oxford Database of Perinatal Trials* is available in computer-readable and print versions. Haynes also cited the *ACP Journal Club*, a bimonthly supplement published by the *Annals of Internal Medicine*; it provides abstracts and commentaries on articles

Assessment programs evaluate physician knowledge, patient satisfaction

Evidence-based criteria and guidelines may ultimately form the base of family medical practice but changes to physician education and practice must recognize patients' reactions to the changes, doctors attending the CMA's 6th annual Leadership Conference were told. Dr. Alex Borgiel, a family physician from Mississauga, Ont., outlined two quality-of-care assessments that have proved useful in audits of primary care practices.

One thrust for self-improvement in family medicine has been the development of a way to assess two important aspects of practice: the physician's knowledge base and methods, and patient satisfaction. More than 300 family medicine practices have been evaluated under the Practice Assessment Program (PASS) that was developed by the College of Family Physicians of Canada from a national pilot project undertaken in the late 1980s.

Borgiel said PASS highlights strengths and weaknesses of a family practice, and established FPs, particularly those far from major urban areas, can benefit from an objective evaluation of clinical and structural aspects of their practices.

The assessment sources are charts and patient questionnaires. Based on information derived from these sources, a computerized analysis of the practice is prepared, offering comparisons with other practices to give the physician a sense of perspective. Advice can range from suggesting a more friendly office environment or improving interview techniques to updating clinical skills and knowledge. The voluntary peer evaluation, which costs $950, is nonpunitive.

"The feedback from physicians is very positive," Borgiel said. Eighty-five percent of participants say they will use the advice they are given to change their practices in an attempt to achieve better medical results and improve patient satisfaction.

In the future, the program also may provide a personal prescription for educational improvement or other remedial action. A similar evaluation program has been developed at the Mississauga Hospital to measure the effectiveness of medical practice in the hospital setting.

"Guidelines for guidelines" will improve quality of care, CMA president says

The CMA used its March Leadership Conference, whose theme was Evidence and experience: rediscovering practice-relevant research, to release a set of guiding principles that Dr. Richard Kennedy, the president, says will improve the quality of health care in Canada.

Guidelines for Clinical Practice Guidelines outlines clear principles that will help standardize the format for guidelines and assure uniform guideline development. "Clinical-practice guidelines are a way to help physicians make clinical decisions and improve the quality of care they deliver," Kennedy said. He noted that more than 40 groups are currently involved in developing guidelines for Canadian physicians, and some 400 individual guidelines have already been released in Canada.

"We anticipate that these clear principles will facilitate greatly the process of guideline development," he told a press conference. The document contains 14 guidelines in three categories — philosophy and ethics, methods, and implementation and evaluation.

Guidelines are seeing increasing use in Canada, Kennedy said. He pointed to the release of thyroid-testing guidelines in Saskatchewan, which resulted in an almost immediate saving of $4 million per year.

During the conference, Dr. Renaldo Battista of Montreal, vice-chairperson of the Canadian Task Force on the Periodic Health Examination, outlined his group's experience with the development of clinical-practice guidelines in the preventive-care field. The task force, which was created in 1976 at the request of the country's deputy ministers of health, led to the creation of a simple methodology for judging scientific evidence and applying it to practice. Since publication of these guidelines began, 31 conditions have been "revisited," 18 new conditions examined, seven update reports published and 43 topics reviewed.

Dr. Don Morgan, a Fredericton physician who sits on the CMA's Council on Health Care and Committee on Quality of Care, told the press conference the "guidelines on guidelines" were developed in collaboration with more than 40 health organizations, which have endorsed the consensus report.

The next step, said Dr. David Walters, the CMA's director of health care and promotion, will be setting priorities for guidelines and improving the database of clinical-practice guidelines by making them available to physicians in a computer-readable format.

Up to 10 copies of *Guidelines for Canadian Clinical Practice Guidelines* are available at no charge from CMA Membership Services, 1867 Alta Vista Dr., Ottawa, ON K1G 3Y6.

relevant to internal medicine that have been drawn from 40 journals. Haynes warned that EBM is meant to be a guide — it is still up to the physician to determine the severity of a patient's condition and then apply the evidence to the situation.

Dr. Bruce Squires, *CMAJ*'s editor-in-chief, said the increasing complexity and volume of medical literature has made it more difficult to disseminate information. He said specific changes have been instituted to allow readers to be more discriminating in their reading. These include development of the structured abstract, the focused clinical review of relevant literature that deals with a specific topic, and the development of practice guidelines.

He warned that EBM still faces many roadblocks. Some journals do not apply the exacting standards demanded by EBM, and some studies are not reported at all: "negative" trials may be considered uninteresting, research studies may not support adaptation of a particular test or drug, or authors may be discouraged when their research does not provide a medical breakthrough.

Squires said journal editors should help authors and peer reviewers adjust to higher standards in reporting results, ensure that manuscripts follow ethical principles, and encourage students and graduates to gain experience by serving as peer reviewers. Editors should discourage publication of research that withholds clinically relevant information, ensure that information is user friendly and free of jargon, and look for innovative ways to present information. "We are our readers' advocates," he commented, and editors have a responsibility to train readers how to use information wisely.

Dr. Jonathan Lomas, a professor of clinical epidemiology and biostatistics at McMaster University, said there is little chance that EBM will ever be of much use to frontline physicians. Governments are fond of EBM because they think it has the potential to contain costs, even though there is no evidence that it can do so. He cited continuing high cesarean-section rates as evidence that guidelines do not necessarily lead to changes in medical practice. Perhaps, he said, EBM should be directed at policymakers rather than clinicians. He concluded that effective use of EBM will only develop through collaboration among government, physicians and policymakers. ■