Background

There are two visible barriers to clinical information transfer in health care.

The intention of this article is to describe these barriers as each relates to the adoption of best evidence in the form of clinical practice guidelines. This “adoption work” is the business of the Guidelines Advisory Committee of Ontario (GAC).1

The current funding of CME does not provide linkage to health-care systems for more effective CME delivery.

First, there is good evidence the Continuing Medical Education (CME) short course, offered as the major product of Canada’s medical schools, is an inadequate vehicle to produce practice change among Canadian physicians.2

Despite good intentions, there are many problems with this kind of continuing professional development. For the most part, such CME is didactic, based on the learning needs expressed by only a few physicians, sporadic, unlinked to practice and, frequently, less than evidence-based.

Interventions showing promise (e.g., reminders at the point of care, maybe opinion leaders or academics detailing feedback on performance) are uncommon, not well used by CME planners and others and not well-understood by the “consumer”—the practising physician. None of this is new (we’ve explored this paradigm in an earlier article in The Canadian Journal of CME3) or intentional.

CME departments and course directors are under pressure to recover all costs and, though focused on providing needed content to their consumers, are often unable to change the format of their offerings.

The current funding of CME within medical schools in Canada (supportive of only marginal innovation and based on a traditional registration and commercial-support based business model) does not provide linkage to health-care systems necessary for more effective CME delivery.

Second, there are huge challenges to the adoption of information by Canadian physicians and other health-care workers. Explored by Cabana, they include lack of time, multiple health-care system barriers, agreement with the change or new information and, from our perspective, problems with the format and availability of the information itself.4
Often, there are too many conflicting messages, not properly synopsized, not evidence-based enough and not delivered in a timely, effective or coordinated manner.

One example may be a sufficient illustration—at the time of our last review (Fall 2004) of lipid-lowering clinical practice guidelines, there were eight published in the English language in the past three years alone.5

The likelihood of a family physician having the time to review this abundant literature on one topic area out of hundreds he or she might face in the course of practice is an unreasonable expectation. This information overload, hardly the intention of multiple guideline developers, reflects the huge diversity of evidence-producers in health care and the wide body of evidence that drives the process.

What can physicians and the health-care system do to remedy this situation? What about medical schools who face their own cost-recovery battles when it comes to CME?

To combat some of these challenges, GAC has adopted a best practice guideline strategy to support physicians and CME providers in their endeavours to practice high-quality care (Figure 1).

This brief article attempts to describe the GAC’s evidence-based guideline search, review and endorsement processes across the spectrum of clinical practice and illustrate its efforts to work with others in the health-care system (especially medical schools) to promote appropriate practice performance. There are two parts to the strategy:

1. Getting the message synopsized and distilled in a usable manner.
2. Getting it out to the practitioner and his/her patient in a timely fashion.

Getting the message right

The GAC is a joint body of the Ontario Medical Association (OMA)6 and the Ministry of Health and Long-Term Care (MOHLTC),7 with representation from the Institute for Clinical Evaluative Sciences (ICES).8 Its mandate is to close the gap between available evidence and best practice.

In order that this gap be addressed, the GAC assesses the needs of health-care providers for evidence-based knowledge and for informational and educational interventions that make that information accessible. Guideline topics include issues related to a wide variety of topics also generated by committee members and by sections within the OMA.

Once a clinical topic is identified, the GAC conducts a systematic search of medical literature databases and Internet-based guideline sites. Identified guidelines are then sent to be peer reviewed by physicians throughout the province, trained in the AGREE Instrument,9 an internationally validated guideline scoring method. The process allows the GAC to assess the quality of clinical practice guidelines, recognize biases in the guideline development process and attempts to assure validity and credibility.

The instrument is also useful in critically evaluating the methods used for developing the guidelines, the content of the final recommendations and the factors linked to their uptake. Each guideline is assessed by a minimum of three physician reviewers; assessments are aggregated and given an apple rating—four apples denoting an excellent guideline.
Using these assessments, the GAC further reviews these guidelines based on the committee’s medical expertise, its knowledge of the Ontario health-care system and the recency of the guideline and then recommends the most timely, relevant and evidence-based clinical practice guidelines (CPGs) for uptake by physicians in Ontario.

As of October 2004, GAC physician reviewers had reviewed 554 individual guidelines; 70 best practice guidelines have been endorsed in 52 topic areas. Table 1 lists the most recent topics reviewed and endorsed.

To help with the time problems facing Ontario physicians, the GAC produces one to two page summaries (posted on the GAC website and featured monthly in the Ontario Medical Review). Additional methods of making physicians aware of GAC recommendations include: presentations, poster presentations, on-site exhibit displays at various events and active dissemination of guideline summaries and tools in electronic or hardcopy formats to specific audiences using numerous communication channels through members of the Ontario Guidelines Collaborative network.

Presentations given to various audiences, from primary-care physicians (e.g., at the Family Medicine Forum or the Internal Medicine Updates) to professional advisory bodies (e.g., the Professional Advisory Committee of the Ontario Hospital Association), to local hospital networks (e.g., the Toronto East Network) also represent a valuable method to help raise awareness of GAC work and clinical recommendations.

**Getting the message out**

A relatively small group (seven core members plus staff) with an ambitious mission (to implement as well as select and review clinical practice guidelines), the GAC has added a long list of other stakeholders in the dissemination of information and assessment of outcomes in the province, called the Ontario Guidelines Collaborative.

Among the members of the collaborative are the CME departments of five Ontario medical schools (Table 2). Using a small amount of funding from the GAC, these medical schools have been able to disseminate clinical practice recommendations as well as to actively assist in two specific guideline implementation projects coordinated by the GAC. They employed different approaches and used either existing resources (own staff) or additional hired part-time support dedicated to GAC-related work. They were able to:

- Use display booths at standard CME events to promote information about the GAC, generally tied to the topic of the program. GAC and other staff are available to deliver hardcopy versions of the CPG summaries and other materials.
- Provide member medical schools with access to guidelines as needs assessment and planning tools.
- Link medical school CME websites to the GAC website to promote the uptake of planned CME events.
- Work with faculty members at CME events to incorporate relevant guidelines and Web references into their presentations.
- Assist with the training of opinion leaders helping the GAC in changing policy and practice. (One example resides in the area of reducing over-ordering of routine chest X-rays in routine preoperative cases.)
- Develop networks of local supporters and champions among department chairs, other leaders, chairs of family medicine, surgery, cardiology, anesthesia and other clinical departments at local hospitals associated with one university (e.g., the University of Western Ontario).
- Innovate ways to connect to physicians, piggybacking on all relevant activities and events (examples include participation in a rural

| Table 1                                                                 |
| Examples of recent topics reviewed and endorsed by the GAC              |
| Diabetes • Endometriosis • Oral contraceptives • Pressure ulcers • ADHD Management |
| Chronic pelvic pain • Infant hearing screening • Otitis media with effusion |
| Dysfunctional uterine bleeding • Prostate cancer screening              |
physicians’ retreat, presentations at grand rounds, expanding the network of Web links into the GAC through local hospital Websites).

• Contribute to evaluating the effect specific guideline implementation interventions had on local hospital policies and procedures, by conducting telephone interviews with chiefs of staff.

Good idea, but….

Prior to making any evaluative comments about the GAC process and plans, we offer here a few words of caution about interpretations of the impact of this project:

• The manner in which guideline review and endorsement is undertaken is imperfect.
• The research on which the guideline implementation and endorsement strategies is based is often poorly understood.
• The way in which we have been able to roll out CME activities and plans has been moulded by practicalities within medical schools and practice realities, well beyond the scope of our project and not easily amenable to formal, objective evaluation.
• Harder outcome measures such as pre- and post-guideline implementation data analysis of hospital utilization for routine preoperative echocardiograph and chest X-rays and of lumbosacral spine X-rays have not yet been completed.

We recognize that, even when carried out, these are crude measures, insensitive to many practice and practitioner realities. Nonetheless, through the work of the GAC, the MOHLTC and the OMA have demonstrated their commitment to the physicians of Ontario and to the endorsement of useful and provincially approved guidelines. Further, through its implementation, these bodies have indicated their recognition of the importance of CME provider—in the case of this article, especially the medical schools and the CME process for

What about the future?

While GAC and its collaborators may be pleased with our beginning success, it is clear much more can be done to forge the link between medical schools and better practice. A partial list of future activities follows:

• using medical school faculty development and departmental rounds to encourage the use of GAC-endorsed guidelines in further CME activities;
• encouraging post-course activity by the use of practice-enabling tools, such as those provided in the area of acute low back pain;
• developing more guidelines-focused CME activities, co-sponsored by the GAC and the relevant school;
• stimulating the development of GAC-endorsed activities for the province’s north, using the new Northern Ontario Medical School (NOMS) faculty, GAC resources and employing NORTH Network in the process;
• linking within medical schools, beyond CME divisions to those interested in guideline development and implementation, health services research and the assessment of outcomes;
• assisting in developing better business and research models for CME delivery across the province, linked more closely to population health and health services needs;
• planning and delivering faculty development workshops on the critical appraisal of guidelines and/or implementation of guidelines;
• facilitating collaborative work across provincial CME departments, for example, to write and submit joint grant proposals to sustain the GAC endorsed guidelines implementation activities in Ontario and
• evaluate the effectiveness of guideline implementation interventions on physicians through surveys, audits and self-evaluation data, examine outcomes and perceptions on the effectiveness of incorporating guidelines into clinical practice.
Perhaps the clearest sign of this commitment is that the GAC and OGC exist at all, aiming to improve the adoption of best evidence by Ontario’s practitioners.

In the end, we will be guided by the province’s physicians—if they indicate to us that the message behind guideline dissemination is consistent and usable, that their CME appears to be better able to reach into their practice environments to assist their practices and indicate to us that patients are better served, then we will consider the GAC process (guidance, adoption and collaboration) a success.

References