New models of continuing medical education (CME) seek not only to impart knowledge but to change physicians’ behavior and even play a role in facilitating organizational improvement. These CME models thus share some of the same basic goals as the field of quality improvement (QI), namely behavioral change and systems redesign to improve patient outcomes.

This article provides some practical ideas about how CME providers and QI experts may beneficially integrate these 2 fields. It outlines several models for harnessing the existing engagement in traditional CME to achieve the goal of equipping practitioners with knowledge and skills related to QI, while also addressing the widely recognized problems with traditional CME. The authors touch on possible incentives to make such integrated models of CME and QI attractive to practitioners.

WHAT IS THE PROBLEM?

Reviews of CME literature highlight the lack of relevant conceptual models for influencing behavior as the explanation for why so few programs change practice or improve outcomes (3, 11). One recent framework (7) sets CME in the context of a complex adaptive system in which many aspects of practice environments, along with appropriate resources, must be aligned to sustain changes in physician behavior.

In response to the limitations of traditional formats, the scope of CME has broadened to include audit and feedback, opinion leaders, multifaceted interventions, reminders, and other more novel approaches (6, 8). Online CME is also increasingly common (12). However, a recent meta-analysis of more than 200 studies found that Internet-based education had similar effects as traditional CME on knowledge and skills and only modest effects on patient outcomes (13). Overall, designing and implementing CME programs that foster changes in practice patterns and improved patient outcomes remains challenging.

From the beginning, the QI field has focused on improving patient outcomes by directly affecting physician behavior or redesigning practice systems to foster reliable delivery of optimal processes of care. Yet, despite widespread attention to health care quality over the past decade, the language, goals, and tools of QI remain foreign to many physicians. A national survey published in 2005 reported that only one third of physicians had ever undertaken QI projects in their practices (14). The American Board of Medical Specialties has made practice improvement a requirement for maintenance of certification for many physicians. A national survey published in 2005 reported that only one third of physicians had ever undertaken QI projects in their practices (14). The American Board of Medical Specialties has made practice improvement a requirement for maintenance of certification for more than a decade. However, the practice improvement component remains a new and frequently challenging experience among candidates for recertification. Many physicians remain unequipped to engage in improvement activities in their practices.
forts to teach QI to clinicians have remained largely restricted to academic or large health systems. Engaging community-based physicians in learning QI occurs less frequently and poses greater challenges.

**Embedding the Promotion of QI in CME Activities**

Despite the evidence that problems with the quality of care occur frequently in clinical practice, most physicians are unlikely to participate in a CME program that is explicitly focused on QI methods. We therefore suggest that exposure to and participation in QI activities be embedded in CME focused on clinical content areas. We outline models with 4 levels of increasing ambitiousness and physician engagement. The lower levels are less resource-intensive and can be implemented relatively easily within traditional CME programs. The higher levels require resources and infrastructure to support the experiential components.

**Highlight Clinical Areas With Quality Problems in Traditional CME**

Attendees at CME conferences seek to update their knowledge of a particular disease or specialty area. The topics covered at such conferences overwhelmingly consist of new treatment methods (drugs or devices) and advances in diagnostic technologies. However, other topics present important clinical information while also delivering content related to health care quality. For instance, a diabetes CME program, in addition to covering recent developments with new classes of drugs and technologies, can include sessions designed to improve patient outcomes by optimizing reduction of cardiovascular risk factors or assessing and managing comorbid depression. Programs can also present practical strategies for recognizing the need to intensify glycemic control. These topics do not teach QI skills per se, but they promote attention to clinical issues involving well-documented gaps in quality for patients with diabetes. Given the prevalence of such gaps for various common conditions (16), this approach can be applied to CME programs tailored for both generalists and specialists.

**Explicitly Add QI Content in CME on Specific Clinical Topics**

While highlighting gaps in quality represents a reasonable start, physicians need skills to act on this information. Continuing medical education programs on clinical topics could include sessions that show participants how to identify quality gaps in their own practices and cover specific methods to address these problems. For example, a program on diabetes could teach chart auditing focused on key processes of care or the adequacy of glycemic control. The material could include examples of common reasons for suboptimal performance and outline strategies for addressing these problems. Where evidence supports specific improvement strategies—for example, some forms of case management for diabetes (17) and heart failure clinics (18)—sessions may focus on practical aspects of implementing these strategies. With this approach, participants would learn specific tools to implement QI in the context of acquiring new knowledge on clinical topics that interest them.

**Supplement CME With Postevent Deliverables**

Postevent deliverables, such as submitting results of QI projects after a CME course, would provide physicians with experience in applying QI in their own practices. For example, participants in a course on diabetes may learn about structured practice audits focused on evidence-based performance measures and strategies to address quality gaps identified in the audit. After the CME program, participants could conduct audits in their practices, develop improvement plans, and potentially submit their plans to CME providers. Such activities could be aligned with maintenance of certification so that participants receive credit for a component of the recertification process. This approach requires further investment of physicians’ time but has the advantage of truly engaging physicians in QI activities in their own settings.

**Embed CME Activities in Larger QI Initiatives**

Coordination of CME with larger-scale QI initiatives offers another potential strategy to engage physicians. For instance, a specialty organization could target a particular quality problem and develop a multicomponent QI strategy that integrates CME with online best evidence resources, toolkits related to specific improvement strategies, and the establishment of learning communities for physicians to share their experiences as they try to implement improvements. The American College of Physician’s Closing the Gap program represents one such example (19), as does the American College of Cardiology’s Door-to-Balloon project (20), which linked participation in a disease registry and nationwide QI program with CME credit and demonstrated substantial improvements in the target process of care. Another program involved collaboration among a major specialty society, a professional certifying body, and a national advocacy organization to improve the care of children with attention-deficit/hyperactivity disorder (21). Other examples of CME activities linked to broader QI initiatives have involved primary care for diabetes and asthma (22) and management of acute gastroenteritis in children (23).

**Conclusion**

Greater integration of CME and QI offers the opportunity to improve health care quality and simultaneously address the widespread calls for changes in CME. The Accreditation Council for Continuing Medical Education recently began pushing CME providers to establish quality metrics in planning and evaluating educational activities.
Continuing medical education may ultimately move away from traditional lecture-based formats in favor of activities that demonstrate target competencies (6), including skills in QI.

Changes, such as those called for in this article, represent a shift in culture for both CME providers and participants. Integrating QI activities with CME will also incur financial costs. However, attending CME meetings represents such a long-engrained activity for physicians that exploiting this tradition seems preferable to abandoning it. Support from organizations with a commitment to QI, such as large health care systems, professional organizations, or health care payers, as well as incentives for participants based on additional CME credits or credentialing benefits, could help moderate cost increases and overcome resistance among physicians.

Realistically, additional incentives may be required. The government of Ontario, Canada, has launched a program in which physicians engaged in certain types of QI activities can receive financial compensation for their time (24). The gesture of compensating for physicians’ time, as much as the modest remuneration itself, has resulted in the participation of approximately one third of eligible physicians. Learning collaboratives can also support physicians by linking them with colleagues who are engaged in similar QI activities to share experiences of overcoming barriers to implementing specific changes in practice (25).

Three of the proposed examples of integration between CME and QI incorporate traditional meeting-based CME. However, the proposed activities all depart from tradition by emphasizing clinical topics relevant to improving care, rather than the longstanding narrow focus on new therapeutics, and by providing skills that support clinicians’ efforts to improve their practices. The highest level of integration we outlined embeds CME activities within broader QI projects, and some specialty societies have already designed innovative initiatives in this manner (19–21). These changes would meet the growing calls for CME reform and simultaneously make teaching QI more accessible to physicians who seek to provide high-quality patient care.

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