

The effectiveness of continuing medical education: Guidelines for an evidence-based approach

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What value do physicians currently place on continuing medical education (CME), especially as they advance along their career path? Is CME effective today, and does physician life-long learning really improve clinical knowledge, physician performance and patient outcomes? Is CME simply a system to help physicians fulfill a requirement, or does it effectively improve physician practice and lead to better health care?

These are not new questions. That they remain unanswered, however, is a signal more work needs to be done to evaluate the efficacy and role of CME in physician professional development. How we as CME professionals address these questions, and how we create and approach new opportunities, will influence how CME moves forward.

Understanding where CME is today and what the path ahead may hold begins with looking back at how the field of CME has developed over the years. An early example of one such development dates to the September 1979 issue of *Evaluation and the Health Professions*, in which John S. Lloyd and Stephen Abrahamson, MD, evaluated the effectiveness of CME at that moment in time.¹ While they were able to report some improvement in the CME process, significant limitations in the methodology of delivering CME precluded them from determining if CME actually had an impact on physician knowledge, performance or clinical outcomes.

Fast forward 19 years to the May 1998 issue of the *Western Journal of Medicine*, which included the article "Continuing medical education: Past, present, future" by Charles Lewis, MD.² Dr. Lewis' review of CME literature noted that effective CME demands a great deal of a physician's time and resources in order to have an impact upon their behavior, performance and clinical outcomes. Perhaps the most important point the article raised was recognizing CME as one phase of a continuous lifelong learning process, connected throughout undergraduate medical education, graduate medical education and continuing medical education. The expectations and applications of this "continuous improvement" process, if it is to extend throughout a physician's career, need to be introduced early in the formal educational process.

Jumping forward another 10 years to the spring 2008 issue of *The Journal of Continuing Education in the Health Professions*, one can review a report on recommendations from the Conjoint Committee on Continuing Medical Education.³ In summarizing the committee's recommendations, the article found that learner-focused CME with measurable outcomes enhances the medical profession's effort to place emphasis on core competencies, training and assessment. If such CME is part of a system of continuous professional development that includes assessment, remediation and reassessment—essential components for improved CME and health care performance, according to the article's research—it has the potential to be a viable tool in helping ensure ongoing

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Director's column

By Alejandro Aparicio, MD

The American Medical Association (AMA) has recognized the central role of education in the physician's professional development since its founding. In fact, at the first AMA meeting in 1847, the new organization heard reports from two committees: the committee on ethics and the committee on education. The importance of the role of education is further codified in the AMA's Principles of Medical Ethics and emphasized in the continuing medical education (CME) definition approved by the AMA House of Delegates:

CME consists of educational activities which serve to maintain, develop, or increase the knowledge, skills, and professional performance and relationships that a physician uses to provide services for patients, the public or the profession. The content of CME is the body of knowledge and skills generally recognized and accepted by the profession as within the basic medical sciences, the discipline of clinical medicine, and the provision of health care to the public. (AMA House of Delegates Policy #300.988)

The AMA also believes that research in CME is necessary to help guide the efforts of activity and program directors when designing educational activities—especially those worthy of *AMA PRA Category 1 Credit™*, which is designed to assure that providers deliver high quality educational activities. In addition, research can help guide the process of selecting an appropriate CME activity format to achieve a desired outcome in the areas of knowledge, skills or professional performance, as noted in the definition of CME. It can also help further refine the design of a CME activity by evaluating the appropriate use of different instructional media, instructional techniques, frequency of exposure and attention to other factors such as participant learning preferences.

It is therefore fitting that the main article in this *CPPD Report*, by Michael Baumann, MD, MS, and Ed Dellert, RN, MBA, addresses the importance of research in CME. The article references the recently published work funded by the American College of Chest Physicians (ACCP) that synthesized

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“Get the Facts!” campaign: A call to action

The “Get the Facts!” campaign is a national effort to disseminate factual information on issues important to the CME community. The National Task Force on CME Provider/Industry Collaboration has initiated this campaign to address and prevent misinformation and misunderstandings about independent CME by providing accurate, objective information about certified CME to those inside and outside the CME community.

Three fact sheets have been developed by the task force's public affairs committee for distribution to the CME community. Available at www.ama-assn.org/go/cmetaskforce, these fact sheets cover topics that include providing valid, independent evidence for clinical

decisions, addressing conflicts of interests and pharmaceutical/bio-technology support of CME.

You are encouraged to get involved! Distribute the campaign's fact sheets to your colleagues, members of your organization, meeting attendees and others. You may also consider posting them on your company's Web site. The CME community has a responsibility to make sure CME information used by stakeholders in the health care arena is accurate and appropriately reflects the current process, standards and regulations.

Please contact ntf.factsheets@ama-assn.org for more information about these fact sheets or the “Get the Facts!” campaign.

Join us at the CPPD Town Hall Meeting in June!

The AMA Division of Continuing Physician Professional Development (CPPD) will hold its annual Town Hall Meeting on Saturday, June 13, in conjunction with the AMA Annual Meeting in Chicago. Updates from the Council on Medical Education, Initiative to Transform Medical Education and other emergent AMA issues related to CME/CPPD will be addressed. Additionally, the AMA is in the process of re-evaluating the requirements for designating and awarding AMA PRA credits, and participants at this session will have an opportunity to discuss and

identify enhancements or changes to the current AMA PRA credit system that will ensure its continued value in the future. We encourage you to take part in this important dialogue. Visit www.ama-assn.org/go/cppdevents for a list of specific questions that will be discussed.

This session will be held in the Columbus C-D Room at the Hyatt Regency Chicago, from 1– 2:30 p.m., June 13. Advance registration for this session is not required. Visit www.ama-assn.org/go/annual2009 for more information about the AMA Annual Meeting.

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ing physician competence. The report emphasized the need for a CME system that supports each individual physician's continuous needs for periodic re-licensing, re-credentialing, re-privileging and Maintenance of Certification (MoC).

Finally, with its March 2009 publication, the American College of Chest Physicians (ACCP) has made available evidence-based guidelines that make recommendations on the effectiveness of CME based on the largest review of the literature to date. Titled "Effectiveness of Continuing Medical Education: American College of Chest Physicians Evidence-Based Educational Guidelines," this recently published work sprang from an initiative that began in 2005 when a proposal was made to evaluate the literature to determine what CME tools and techniques are most effective in improving physician knowledge and skills.⁴ This search was to be conducted and synthesized by an independent evidence-based practice center.

As a result, the Agency for Healthcare Research and Quality (AHRQ) awarded the Johns Hopkins Evidence-based Practice Center the task of performing a systematic review of the literature to answer the following six key questions regarding the effectiveness of CME:

1. Is there evidence that particular methods of delivering CME are more effective?
2. Do changes in knowledge, attitudes, skills, practice behavior, or clinical practice outcomes produced by CME persist over time?
3. What is the evidence from systematic reviews about the effectiveness of simulation methods in medical education outside of CME?
4. Which characteristics of the audience influence the effectiveness of certain educational techniques?
5. Which external factors reinforce the effects of CME in changing behavior?
6. What is the reported validity and reliability of the methods that have been used for measuring the effects of CME?

The evidence synthesis primarily focused on physician learners who have completed training, and if CME continues to affect change and impact performance over time. These areas of inquiry not only represent important first steps in critically analyzing the CME delivery process and CME efficacy, they represent issues important to the growing global emphasis being placed on CME as a key factor driving MoC, maintenance of licensure (MoL) and quality improvement (QI).

While this recent research confirmed that the level of evidence was generally of low quality, making meaningful recommendations for streamlining and maintaining the existing drivers to move CME quickly forward was still possible. For example, the Johns Hopkins' literature review revealed important limitations created by differences in the terminology being used in CME

activities and in conducting CME research. This variation has led to a lack of standardized CME approaches and CME research controls, which makes comparisons difficult and quantitative syntheses often impossible.

In addition to creating guidelines, the ACCP report offers an extensive literature review of the evidence that exists about the effectiveness of CME, both in terms of knowledge translation and patient care outcomes. Past reports have called for a curriculum change in medical education that would emphasize limiting the use of lectures to deliver CME and promote placing greater emphasis on problem-solving and critical thinking.⁵ In keeping with this model for a proposed curriculum change, the ACCP guidelines focus on formative assessment, education and evaluation. Formative assessment—which occurs when the physician learner is given feedback in a way that enables improved learning or performance—can have a significant impact on individual learning by affording the opportunity to evaluate and self-assess knowledge, skills, judgment and professional values. Moreover, the formative assessment process allows feedback that both reinforces that a physician learner is providing established standards of care for his or her patients, and that helps advance positive change in the physician learner by identifying gaps in his or her knowledge or skills. In contrast to traditional didactic (lecture-based) education, which the ACCP evidence review identified as the least effective form of learning when used as the sole means of instruction, formative assessment that incorporates diverse CME activities within teaching modalities was found by the report to be the most effective and promising approach.⁶

For the physician learner and the physician educator, one thing is certain: the field of CME is changing rapidly. While the most effective combination of CME teaching and intensity has yet to be determined, continuing to promote a culture that fosters physician life-long learning and professional development remains a vital goal. With this in mind, we hope you take away key areas of the ACCP guidelines and implement them into your educational practice. Doing so will help contribute to the success of future CME research—which is a significant need that must be met if we are to continue the advancement of physician learning. Visit www.chestjournal.org for more information on the guidelines.

References

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AMA offers CME activities on improving care for underserved populations

Educational activities developed by the AMA are available for physicians and other health care providers on many topics, including how to improve care for underserved populations. Two new activities from the Educating Physicians on Controversies and Challenges in Health series include “Improving the health of vulnerable populations” and “Health care disparities among racial/ethnic minority patients.” Activities certified for AMA PRA Category 1 Credit™ are available at no charge.

Each activity is offered online, and consists of short, informational Web-streaming videos that provide physicians with solutions to various challenges that they may encounter in the practice setting—the interface of clinical medicine and public health. The activities focus on how to improve care for underserved populations, such as low-income and racial and ethnic minority patients. Specific segments

within these activities include: “Use of complementary and alternative treatment by patients,” “Self-management strategies for vulnerable populations,” “Role of trust in physician interactions with minority patients,” and “Universal HIV screening and reducing HIV disparities.”

Each narrated segment includes film and other audiovisual aids (e.g., physician interviews) that review the background of the selected problem, discuss the impact on clinical practice and offer solutions to improve patient care. References and links are available for physicians and other health care providers to further explore each issue discussed.

Visit www.ama-assn.org/go/epoch to access these CME activities, or www.ama-assn.org/go/cme to view other CME activities offered by the AMA.

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Thank you for your feedback. If you have questions, please call (312) 464-5196.

evidence related to the effectiveness of CME and ultimately led to the development of the evidence-based educational guidelines. The ACCP guidelines, which appeared in the March 2009 supplement of *Chest*, suggest that “leaders in medical education ... foster the identification of high-priority research topics in CME research ... and conduct scientifically rigorous studies of the process and effectiveness of CME.”¹

The recommendations put forth in the guidelines use research to suggest ways in which CME can be more effective—but it is clear that more research is needed. With limited resources, and the possibility that those resources will be reduced further, at least while the current economic climate continues, it is important to use resources and existing knowledge in the most effective way. Whether the objective is to increase or reinforce knowledge, learn or improve a skill, change or reinforce behavior, enhance patient outcomes or improve population health, we know that physicians need the knowledge and skills necessary to be effective within the health care system, to provide excellent patient care and to improve the health of the public. Recommendations provided in CME activities should be based on the best available evidence. Just the same, our *design* of educational activities should be based on the best available evidence as well.

As CME professionals, we know the importance of continuing the dialogue on improving the education we provide to physicians. Going forward, please note that the *CPPD Report* will move exclusively online—a convenient way for you to access the same content. To ensure you'll receive the next issue uninterrupted, please take just a moment to resubscribe with your e-mail address at www.ama-assn.org/go/CPDSubscribe (see Page 4 for more details).

References

1. Moores LK, Dellert E, Baumann MH, Rosen MJ. Executive summary—Effectiveness of continuing medical education: American College of Chest Physicians Evidence-Based Educational Guidelines. *Chest*. 2009;135. www.chestjournal.org. Accessed May 15, 2009. doi: 10.1378/chest.08-2511

AMA webinars available on-demand

Enjoy immediate access to any of the following recorded webinars from the AMA Division of CPPD discussing PI CME, the AMA's performance improvement CME model, and more:

- Implementing performance improvement CME in the hospital setting
- Implementing performance improvement CME in medical schools
- Performance improvement CME and the physician leadership imperative
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Each purchase includes two viewings of the webinar presentation. Visit www.ama-assn.org/go/webinarscppd for more information or to register.

Provider and physician FAQs

Q Must an accredited CME provider maintain records of AMA PRA Category 1 Credit™ earned by physicians participating in their certified activities?

A Yes. The AMA requires that providers record the number of AMA PRA Category 1 Credit™ claimed by each physician participant, and include this number when issuing a certificate or transcript of AMA PRA Category 1 Credits™ to the physician. Providers must award the actual number of credits claimed by the physician, rather than awarding the maximum number of credits for which the activity was designated.

Providers must keep records for each of their certified activities for a minimum of six years, and may choose any system to

accomplish this. Whether providers issue individual credit certificates or transcripts to participating physicians, these documents should accurately reflect all pertinent details of the activity and the number of AMA PRA Category 1 Credits™ claimed. Providers must document, at regular intervals or when a physician requests it, the AMA PRA Category 1 Credit™ awarded to participating physicians.

Accredited CME providers should also check with their accreditor (either the Accreditation Council for Continuing Medical Education or their state medical society) to confirm any additional record-keeping requirements.

Visit www.ama-assn.org/go/cme to view our full list of physician and provider FAQs.

Save the date!

20th Annual Conference of the National Task Force on CME Provider/Industry Collaboration

“Learning from the past, planning for the future”
Oct. 14–16, 2009
Baltimore Marriott Waterfront

Visit www.ama-assn.org/go/cmetaskforce for more details and registration information (available in June).

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CPPD on the Web

AMA CME resources
www.ama-assn.org/go/cme

Physician's Recognition Award information for physicians and CME providers
www.ama-assn.org/go/pra

Resources for accredited CME providers
www.ama-assn.org/go/cmeprovider

Read the PRA booklet
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Past editions of the *CPPD Report* can be viewed in PDF format at:
www.ama-assn.org/go/cmecppd

Calendar of events

June 4–5
Spring Meeting of the Coalition for Physician Enhancement
Toronto
www.physicianenhancement.org/2009_Spring.html

June 5
Illinois Alliance for Continuing Medical Education
20th Annual Meeting and Anniversary Celebration
Oak Brook, Ill.
www.iacmeonline.org

June 7–9
Annual Meeting of the Global Alliance
for Medical Education
Lyon, France
www.game-cme.org/go/cppdevents

June 13
AMA Division of Continuing Physician Professional
Development Town Hall Meeting
Chicago
www.ama-assn.org/go/cppdevents

June 25–26
2009 CME: The Basics Institute
Rosemont, Ill.
www.acme-assn.org

August 12–14
Accredited CME as a Bridge to Quality Workshop
Chicago
www.accme.org

Oct. 14–16
20th Annual Conference of the National Task Force
on CME Provider/Industry Collaboration
Baltimore
www.ama-assn.org/go/cmeftaskforce

Nov. 6–11
Association of American Medical Colleges Annual Meeting
Boston
www.aamc.org

Nov. 20–21
2009 Council of Medical Specialty Societies
Annual Meeting
www.cmss.org

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