



Designing Continuing Medical Education to Improve Clinician Practice, Part 1

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The fundamental tenet underlying the creation of all accredited continuing medical education (CME) is that the activities and programs we develop must improve how clinicians practice medicine and, consequently, improve patient health. To accomplish this goal, medical writers must identify where clinicians' professional ability fails to meet best practice standards, then design CME that helps elevate their competency. This three-part series will provide an introduction to the process CME writers use to ensure the programs we develop are relevant and effective.

In the Beginning There Was Educational Linkage

When we develop CME, a process called educational linkage guides us through the creation of a series of interdependent products. If done correctly, each element in the process informs the one that follows next, thus creating a logical flow (Figure 1). Through educational linkage, direct connections can be made between (a) an identified deficiency in physician performance, (b) the educational intervention, (c) some change in way clinicians practice, and (d) an improvement in patient health outcomes.

The needs assessment is the foundation of all development of CME. The needs assessment demonstrates that there is a definite need to improve clinician competency through education. The first step in writing a needs assessment is to conduct a gap analysis.

Step 1: Identifying the Practice Gap

The first element in the creation of CME is a process called discrepancy or gap analysis. At its essence, gap analysis is the study of differences between two competency points in which current practice behavior is compared with an ideal or accepted standard of performance. The Accreditation Council for Continuing Medical Education (ACCME), the organization that accredits CME providers, defines a clinical practice gap as the "...difference between health care processes or outcomes observed in practice, and those potentially achievable on the basis of current professional knowledge."¹



Figure 1. Educational linkage. Copyright © 2012 InQuill Medical Communications.

Providers of CME must create programs that correct the discrepancy so clinicians attain the desired level of competency—that combination of knowledge, skills, and attitudes that embody proficiency. Gap analyses provide direction for the development of content by identifying the gap between what is and what should be, by identifying where clinicians have an insufficient level of knowledge or skill, or where their practice performance is substandard. Gap analyses also clarify what measurable outcomes educational programs should achieve by determining what our learners ought to be able to do differently in the clinical setting after participating in the CME activity (Figure 2).

To be accredited by ACCME, CME programs must address relevant competency gaps. Medical educators must "... incorporate into CME activities the educational needs (knowledge, competence, or performance) that underlie the professional practice gaps of their own learners."²

Identifying a gap in practice performance involves a proven association between two factors: (1) a lack of

clinician proficiency in a specific area, and (2) the poor health outcome caused by it. How CME providers pinpoint the gap depends on which of these two factors we know and which we need to discover. There are three situations typically encountered. In the first situation, a known gap in physician competency is associated with a known poor health outcome(s) (Figure 3A). This is the most common situation and the simplest to document. In the other two cases, one element is unknown and must be identified through reliable sources of information. Either we know that a particular poor health outcome exists and a search is made to identify the gap in competency that causes it (Figure 3B), or the gap in competency is known and its effect on patient outcomes must be verified (Figure 3C).

Step 2: Documenting the Educational Need

Once an association between the gap in clinician practice and a poor health outcome(s) has been determined, the next step in the educational linkage process is to document the need for medical education that will help clinicians improve their competence and close the gap. Educators must demonstrate that there is a real necessity for the training. Accredited CME must be directly related to the work clinicians do and help them practice more effectively or efficiently. According to ACCME, CME must "... 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 that 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."³ There are many programs created for clinicians that are interesting and beneficial, but unless there is a direct correlation between the characteristic(s) the program seeks to improve and some aspect of patient care, it can't be CME. For example, a course in investment finance, while beneficial to the clinician, has no direct relevance to patient care, and therefore can't offer CME credit.

Furthermore, every gap in clinician competency and every need for education must be objectively demonstrated. It is not enough for a program director to simply decide it would be a good idea to develop a program on geriatric diabetes. There has to be some way to prove the need exists. There are three broad categories of sources that provide information about existing educational needs: documented needs, presumed needs, and expressed needs (Box 1).



Figure 2. CME closes the gap between current and best practice. Copyright © 2010 InQuill Medical Communications.

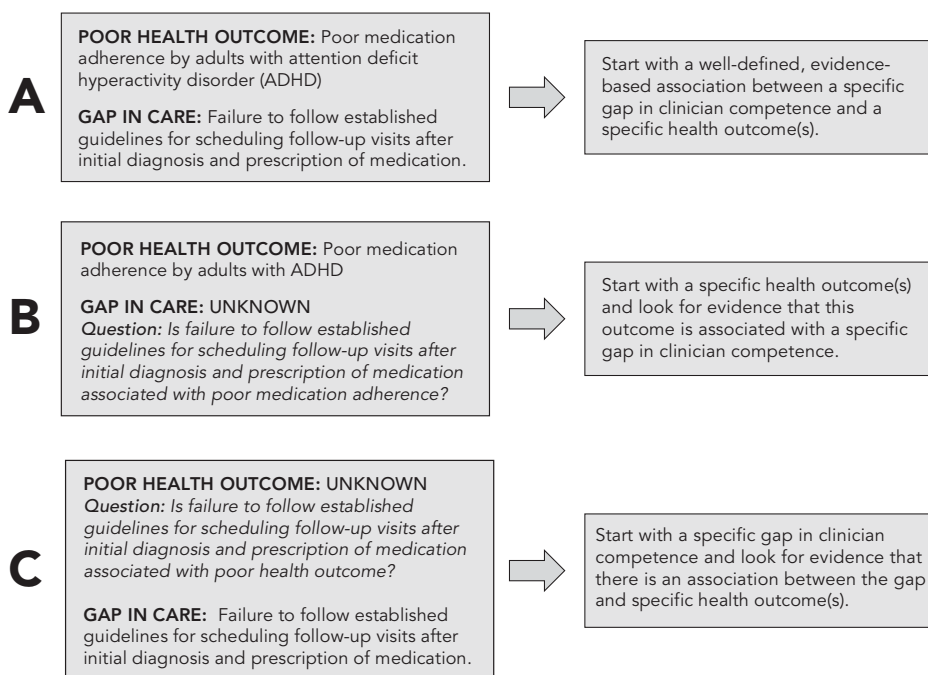


Figure 3. Three situations illustrating how CME providers pinpoint gaps in practice performance. The health outcome of poor adherence to prescribed medication by adults with attention deficit hyperactivity disorder is used as an example.

Box 1. Sources of Information on Educational Need

DOCUMENTED NEEDS	PRESUMED NEEDS	EXPRESSED NEEDS
Objective external data sources	New methods of diagnosis or treatment	Evaluations of past CME activities
Epidemiologic data	Availability of new medications	Patient inventories
Morbidity and mortality data	Development of new technology	Consensus reports
Quality assurance and audit data	Changes in healthcare legislation or regulations	Clinician surveys
Evidence-based literature	New guidelines	Expert opinion

Documented needs, the most common category used to substantiate the need for CME, are proven through objective, external data sources and are typically evidence-based. Examples of documented needs include published literature and epidemiologic data. Using our example of geriatric diabetes, valid sources of documented need might be prevalence and incidence rates of type 2 diabetes published by the Center for Disease Control or any other secondary source literature, which show that adults ≥ 65 years age are disproportionately burdened by diabetes and its acute and chronic complications.

Presumed needs can be inferred from a variety of sources, such as changes in diagnostic criteria or emergence of new treatments, innovations in technology, or new regulations. From these developments, it can be surmised that clinicians will need training to master and incorporate the new information or skill into their practice. The recently published consensus statement by the American Diabetes Association, which provides a framework for consideration of treatment goals for glycemia, blood pressure, and dyslipidemia in older diabetic adults, is a good verification of presumed need for CME.⁴

Expressed needs are conveyed directly by clinicians. In keeping with the current effort by CME professionals to make medical education more learner-centered and connected to clinician practice, we frequently seek evidence of educational need from clinicians who are familiar with the subject of a particular CME program. This information is collected a variety of ways, including use of targeted surveys and interviews with medical experts and clinical administrators to obtain the clinician's perspective and recommendations for improving patient care. When my students write their needs assessment, I require that one source of information about the need for education come from a live interview. There is so much we can learn about the challenges clinicians face by talking to them directly that isn't written in meta-analyses or review papers.

In an upcoming issue of the *AMWA Journal*, Part 2 of this series will describe how to pull together information from the gap analysis and information we've gathered to verified the need for medical education to create a formal document, the CME Needs Assessment. I will discuss how, through educational linkage, this document is used to inform the educational objectives of the program, the content, activity evaluation, and outcome studies we conduct to demonstrate the effectiveness of our CME.

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