

## Quality issues in continuing medical education in Saudi Arabia

Ali M. Al-Shehri,<sup>a</sup> Ali I. Alhaqwi,<sup>a</sup> Mohammed A. Al-Sultan<sup>b</sup>

From the <sup>a</sup>Department of Family Medicine and the <sup>b</sup>Scholarship Office, Academic Affairs, King Saud Bin Abdulaziz University for Health Sciences - National Guard, Riyadh, Saudi Arabia

Correspondence and reprints: Ali M. Al-Shehri, MD · Department of Family & Community Medicine, King Abdulaziz Medical City PO Box 70388, Riyadh 11567, Saudi Arabia · shehria3@ngha.med.sa · Accepted for publication July 2008

Ann Saudi Med 2008; 28(5): 378-381

The issue of continuing medical education (CME) in Saudi Arabia is no longer quantity but rather quality. Quality Management (QM) of the current huge number of CME activities is essential to ensure its merits and outcomes. Sound evaluation is the cornerstone of any QM process to CME. However, issues related to models of evaluation, CME stakeholders, principles of adult learning and assessment should be considered before deciding on the type of evaluation appropriate for QM of CME. Our aim is to draw attention to the importance of developing a QM process for CME that is valid, reliable, feasible and acceptable to different CME stakeholders. The huge volume of CME programs needs QM to ensure its utility for healthcare providers and consumers. Understanding relevant evaluation models and the complexity of evaluating CME is a necessary step towards appropriate action.

In 2006, more than 1600 continuing medical education (CME) programs were provided by one health organization in Riyadh City, the capital of Saudi Arabia. Assuming that the same number is provided by each of the other five government health organizations, this means that more than 8000 CME programs are provided in one city in Saudi Arabia annually. This does not include CME provided by the private sector, which results in a huge number of programs when all are counted.

Many challenges face CME in Saudi Arabia, including “cooperation and coordination among multiple providers of CME”.<sup>1</sup> It has been suggested that “unifying and integrating existing multiple CME under the Saudi Council for Health Specialties would form the first, but essential step in addressing the challenges” facing CME.<sup>1</sup> Luckily, the initial phase of this essential step has begun recently whereby the Council is responsible for approving and coordinating CME, so that duplication and fragmentation would be minimized if not prevented.<sup>2</sup> However, with this huge number of CME activities, it is clear that the real challenge is quality management (QM) of CME: “Unless CME provision is based on a more secure and evaluated ground and integrated to health care delivery, many resources will continue to be squandered with doubtful outcome”.<sup>1,3</sup>

QM of CME is a major challenge worldwide and it deserves appropriate attention at this stage of development in Saudi Arabia.<sup>1-8</sup> Thus, this paper highlights major issues related to QM of CME. The aim is to stimulate scientific discussion among professionals interested in QM of CME in Saudi Arabia and draw attention to the importance of initiating a national QM system for CME to ensure it meets its purpose for professionals, for the healthcare system and above all for patient care.

### Quality management and accredited CME

Conventionally, QM is related to structure, process and outcome.<sup>7</sup> QM of CME has to be linked to these three stages to be useful.<sup>7,8</sup> QM of CME in Saudi Arabia is similar in its outlook to that in the USA and some other developed countries in that certain providers of CME are accredited by a central council. For example, the Saudi Council for Health Specialties is the accrediting body for CME in Saudi Arabia whereas the American Council for CME (ACCME) is the accrediting body in the USA. The assumption is that accredited providers would ensure the QM of their CME. However, QM of CME in the USA has become a hot issue recently: “In late 2006 and 2007, the ACCME was asked by the US Senate’s Committee on Finance to demonstrate how its

accreditation and oversight processes mitigate the risk of influence and bias from commercial entities that fund CME.<sup>7,8</sup> As a result of public and professional pressures, the ACCME has to update its criteria on accreditation so that “accreditation criteria provide the algorithm that links CME to .quality improvement”.<sup>8</sup> If this is the case with ACCME, which is considered to be one of the most developed organizations for CME, it is reasonable then to explore QM of CME in Saudi Arabia. Moreover, It is important to recognize that similarity in outlook does not necessarily mean similarity in content, process or outcome.

In Saudi Arabia there is no evidence that current accredited CME is subjected to QM that takes into consideration structure, process and outcome. It is a common observation that existing QM of CME is limited to part of the structure: venue, materials, audiovisual, reception and perceptions of participants about CME. Opinion questionnaires are the most common forms of evaluation used. Although this is important, there is a need for a more multilevel model of evaluation that takes in consideration QM of CME in terms of structure, process and outcome. Multilevel evaluation of CME should provide data on the utility of CME for both providers and consumers of healthcare. Evaluating educational programs is not an easy task.<sup>5,9-12</sup> However, educational literature reveals a number of models of evaluation that are worth consideration.<sup>5</sup> A brief description of these models of evaluation in relation to education follows.

## Models of Evaluation

### *Objectives-oriented evaluation model*

The distinguishing feature of this model is that the purpose of some activities is specified and then evaluation focuses on the extent to which this purpose is achieved. Developers of this model see evaluation as a process of determining the extent to which objectives of a program are actually attained.<sup>12</sup> This approach has dominated the thinking and development of evaluation since the 1930s. The information gained from an objectives-oriented evaluation could be used to reformulate the purposes of the activity, the activity itself, or the assessment procedures and device used to determine the achievement of the purposes. The advantage of this model is in its application and use as a straightforward procedure for letting the achievement of objectives determine success or failure and justify improvements, maintenance or termination of programs. However, this model is criticized for neglecting the context in which evaluation takes place, ignor-

ing important outcomes other than those covered by objectives, lacking standards to judge the importance of observed discrepancies between objectives and performance levels, and promoting a linear inflexible approach to evaluation. In short, this approach may lead to tunnel vision and limit evaluation's effectiveness and potential.<sup>5,12</sup>

### *Goal-free evaluation*

The two major characteristics of goal-free evaluation are that the evaluator purposefully avoids becoming aware of the CME goals and those goals are not permitted to narrow the focus of evaluation. Goal-free evaluation focuses on actual CME outcomes rather than the intended goals. Thus, goal-free evaluation increases the likelihood that unanticipated side effects will be noted. This model concentrates on participants' views and has minimal contact with program manager and staff.<sup>12</sup> The disadvantage here is that it addresses one aspect of the whole program and participants' views may be subjective. However, if combined with the objectives-oriented model so that they supplement each other, the disadvantage will be eliminated.

### *Management-oriented evaluation and context, input, process and product (CIPP) model*

The management-oriented evaluation approach is meant to serve CME decision makers. Its rationale is that evaluative information is an essential part of good decision-making and that the evaluator can be most effective by serving administrators, managers, policy makers, boards, practitioners and others who need good evaluative information. Developers of this method have relied on a system approach to evaluation in which decisions are made about inputs, processes, and outputs. One of the management-oriented evaluation models is the CIPP evaluation model, a framework developed to serve management administrators facing four different kinds of decisions: CIPP to serve planning, structuring, implementing and recycling decisions, respectively.<sup>12</sup> This model is viewed as: “the process of delineating, obtaining and providing useful information for judging decision alternatives”.<sup>12</sup> Developers of this approach make the decision(s) of program managers the pivotal organizer for the evaluation rather than the program objectives. This approach is systematic in addressing the main aspects of CME activities. It also stresses the importance of the utility of information and timely use of feedback by decision makers. Its main focus on decision makers raises the possibility of ignoring other stakeholders. Its cost and complexity raises another concern.

**Table 1.** Application of Kirkpatrick model of evaluation to an advanced life support (ALS) course.

Hierarchical level	Possible criteria for evaluation of learning
Reaction	Participants express satisfaction with content and learning methods of the program.
Learning	Participants show understanding of principles of effective ALS.
Behavioral change	Participants resuscitation skills improved.
Community impact	More lives saved because of better participant skills.

**Table 2.** Brookfield's principles of adult learning.<sup>16</sup>

<ul style="list-style-type: none"> <li>• Participation is voluntary.</li> <li>• Learners collaborate with providers in the planning and decision-making process.</li> <li>• Mutual respect must exist between provider and learner.</li> <li>• Activity must include a continuous cycle of action followed by reflection then analysis followed by further reflection.</li> <li>• Learning must foster a spirit of critical reflection in participants.</li> <li>• Learning must nurture self-directed empowered adults.</li> </ul>
---

*Kirkpatrick Hierarchy of Evaluation*

The Kirkpatrick model is a stepwise approach to evaluation.<sup>13</sup> “The first step is concerned with the reaction of participants to a program; the second with the actual learning that takes place in terms of knowledge and skills; the third with the ability to transfer what has been learned into everyday practice; and the fourth with the impact of a program on the community.”<sup>5</sup> This model has great potential and deserves close scrutiny to make it more suitable to CME. Table 1 shows a practical application of the model on the well-known advanced life support course (ALSC).

Each model of evaluation described above has its pros and cons. Interested professionals may use one or more of these models for QM of CME or indeed develop their own model of evaluation. The Kirkpatrick model with its multilevel application may prove useful for practical application of QM of CME. Whatever model of evaluation chosen, it has to be linked to the three main stages of QM: structure, process and outcome. Moreover, before deciding on what sort of model of evaluation, we must know the stakeholders of CME and the principles of assessment.

**Stakeholders**

Practicing doctors are the main focus of current CME programs in Saudi Arabia with little, if any attention paid to other stakeholders. The following are the main three parties (stakeholders) interested in CME:<sup>3</sup>

- + doctors/learners/consumers

- + teachers/providers/trainers
- + managers/accreditors

CME programs have to address the needs of these stakeholders to reach a desired outcome. QM measures should identify the needs of each party, the commonality among the three parties as well as conflicts of interest. Forming a collective vision for all stakeholders that serves patient care and meets each party's need may be a good start for developing a “coalition of interest model”.<sup>14,15</sup> Otherwise, each party may choose any model of evaluation mentioned above that addresses their objectives or indeed develop their own model of evaluation. Whatever model is used for QM of CME, it must be remembered that stakeholders are adult learners who will benefit most by adopting adult learning principles in CME provision. Table 2 shows the most relevant principles of adult learning.<sup>16</sup>

**Principles of assessment**

We have shown that evaluation is an essential component of QM in CME and it has to take into consideration the three stages of QM as well as the type of CME stakeholders. However, there are also certain principles of assessment that need to be observed. These principles are validity, reliability, feasibility and acceptability.<sup>17,18</sup> Validity is simply defined as the ability of an evaluation tool to evaluate what is meant to be evaluated (i.e. simply not to mix apple with oranges). Many types of validity are reported in the literature: content, construct, criterion, face, predictive and even coherent validity.<sup>17,18</sup> Validity of any program has to be judged against the work of doctors in actual practice. Reliability is concerned with the ability of an evaluation tool to give the same result over time by the same or a different user/evaluator with a high reproducibility. Reliability has been described as a “sine qua non” for any evaluation process.<sup>18</sup> Thus, it is essential to establish high reliability for any evaluation process used in CME. Feasibility is an issue when evaluation involves a large number of participants and many contextual factors. It is not feasible, for example, to ask established doctors attending CME activities to sit for an examination or evaluation that takes 3 hours. Acceptability is an issue for all stakeholders of CME, but particularly working doctors who are the consumers of CME. Fairness and perceived benefits are fundamental elements for an evaluation tool to be accepted by doctors. Acceptability for managers may relate to the cost-benefit analysis of CME. Certainly, all stakeholders will be happy if the evaluation strives for professional development of doctors, cost saving for managers and better quality for the service.

## Discussion

The existing huge quantity of CME in Saudi Arabia needs a QM process to ensure its merits and outcomes. QM of current CME is at best unclear with little impact on stakeholders, healthcare services, and patient care and at worst encouraging “cheap junk” CME. Although one may argue that the accreditation process for CME is enough measure to ensure quality because it is similar to the accreditation of CME in the USA and many other developed countries, this argument is invalid for two major reasons. First, there is no evidence to support this argument, and indeed, common observation of existing CME indicates that similarity is limited to the organizational structure rather than to content, process and outcome. Second, as indicated above, the ACCME, which is the accrediting body for CME in the USA and one of the well-established organizations in this field, has been asked to revise its criteria of accreditation to ensure “that CME is provided through a valid and credible accreditation system, independent of commercial interests and free of commercial bias in all CME topic selection, planning decision, and presentation content.”<sup>8</sup> If QM of CME is an issue in one of the most established accredited CME organizations in the world, with all the intrinsic and extrinsic supporting factors in the USA, then the argument that the current accreditation system for CME in Saudi Arabia is enough measure for QM does not hold. In fact, a review of the current accreditation process is warranted to ensure the QM of CME. Evaluation is a cornerstone of any review and any

quality management process.

In this article, we have described educational models of evaluation so as to understand their relevance and potential in meeting local needs. We also argue that one cannot decide on a type of evaluation model without understanding the stakeholders of CME as adult professionals and without understanding the complexity of the assessment process in terms of validity, reliability, feasibility and acceptability. The difficulty of finding valid, reliable and feasible models of evaluation that take into consideration the interests of all stakeholders as adult learners and at the same time addresses the knowing, feeling and doing of stakeholders cannot be underestimated. Hence, this article could be criticized as going with the ‘soft’ option of describing the “what” rather than the ‘hard’ option of providing the “how to”. However, it has been proven that understanding these issues in terms of relevance and complexity is an essential prerequisite to developing “how to” approaches.<sup>3,5,7,18</sup> Interested professionals may use the Kirkpatrick model of evaluation or a combination of models described above or indeed develop their own model of evaluation. Whichever model is chosen, it has to take into consideration the issues described in this paper. Our aim is not to provide a ready-made prescription for “how to”, but rather to bring this hot subject to the attention of researchers and interested professionals to contribute scientifically to the QM of existing CME provision to ensure its benefits for healthcare professionals, healthcare systems, and patient care.

## REFERENCES

1. Al-Shehri AM, Al-Haqwi AI, Al-Turki S. Challenges facing continuing medical education and the Saudi Council for Health Specialties (Leading Article). *Saudi Medical Journal*, 2001; 22(1):3 - 5.
2. Al-Furihi H (General Secretary of SCHCS). *Al-Multaqa Al-Sehi Magazine*, September 2007.
3. Al-Shehri AM, Bligh J, Stanley I. A draft charter for general practice continuing medical education. *Postgraduate Education for General Practice*, 1994; 76: 384-389.
4. Holm H. Quality issues in continuing medical education. *BMJ* 1998; 316:621-624
5. Al-Shehri AM, Bligh J, Stanley I. Evaluating the outcome of continuing education for general practice: A coalition of interest. *Education for General Practice*, 1994; 5:135-142.
6. Pitts J, Percy D, Coles C. Evaluating teaching. *Education for General Practice*, 1995; 6:13-18.
7. Dolmans DH, Wolfhagen HA and Scherpbier AJ. From quality assurance to total quality management: How can quality assurance result in continuous improvement in health professions education. *Education for Health* 2003; 16(2): 210-217.
8. ACCME. CME as a bridge to quality. Available from: <http://www.accme.org>. Accessed on 20th May 2008
9. Rowntree D. Evaluation and Improvement. Educational technology in curriculum development, London, PCP Educational Series, 1987.
10. Coles CR and Grant JG. Curriculum evaluation in medical and healthcare education. *Medical Education* 1985; 19:405-422.
11. Cousins JB, Earl LM. The case for participatory evaluation. *Educational Evaluation and Policy Analysis*, 1992; 14 (4): 397-418.
12. Fitzpatrick JI, Sandaers JS, Worthen BR. Program Evaluation, Alternatives Approaches and practical Guidelines (3rd Edn). Pearson Education Inc. 2004
13. Kirkpatrick DI. Evaluation of training. Training and development handbook. McGraw Hill, New York, 1975.
14. Al-Shehri AM, Stanley IM, Thomas P. Developing Organizational Vision. *BMJ* 1993; 307:101-103.
15. Senge P. Shared Vision. The fifth discipline, London, UK, Century Business, 1990.
16. Al-Shehri AM, The market and educational principles in Continuing Medical Education for General Practice. *Medical Education*, 1992; 26:384-388
17. Mehrens W, Lehmann I. Measurement and evaluation in education and psychology. 3rd Edition, New York, Holt, Rinhart and Winston, 1984.
18. Stanley I. and Al-Shehri AM. Reaccreditation-The why? What? And How? Questions. *British Journal of General Practice*, 1993;524-529