

# Continuing Medical Education Strategy for Primary Health Care Physicians in Oman: Lessons to be learnt

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## Abstract

**Introduction:** Continuing medical education (CME) is important for professional development, to improve doctors' clinical performance that ultimately influences the quality of the health outcomes. In the presence of an increasing number of family physicians serve in the primary health care system upon graduation in Oman make us to consider the meta-cognition of the learner and engaged them in learning process. The purpose of this paper is to examine ways of improving the continuing education methods for the physicians. **Objective:** To assess the preferred method of continuing education for primary health care physicians. **Methods:** We conducted a program evaluation among a group of general physicians who were involved in some of the activities in continuing education at end of their program in the Muscat region health centres in Oman. The main outcome measure was to study the preferred method for CME. **Results:** The majority of the participants believe that continuing medical education improves their practice. In addition,

the finding suggests that small group learning and combination of methods are the preferred methods of continuing education for primary health care physicians. **Conclusion:** Interactive small group learning is shown to be more effective to achieve the learning objectives and ultimately improve practice. Practice-based small group learning is the method we recommended.

**Keywords:** Continuing medical education, interactive learning, small group, professional education, problem-based learning

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## Introduction

An increasing number of family physicians serve in the primary healthcare system upon graduation in Oman. Most are qualified, knowledgeable and very well skilled; however, engaging daily in a busy clinic dissuades these physicians from participating in continuing education. Moreover, no official organized continuing education programs exist for primary health care physicians. Many physicians move to administrative work, lose interest or become swamped in the daily work routine. The purpose of this paper is to examine ways of improving the continuing education system for the physicians.

### Background Philosophy

Continuing medical education (CME) is important for professional development among health personnel. Davis defines CME as "any and all the ways by which doctors learn after formal completion of their training".<sup>1</sup> The primary purpose of CME is to improve doctors' clinical performance that ultimately influences the quality of the health outcome. Furthermore, it decreases professional isolation and sustains interest and confidence.

CME can take the form of reading journals, attending lectures and seminars, rounds, small group work, audit, informal consultations with colleagues, interactive computer programs and practice visiting.

Therefore, considering the meta-cognition of the learner (the process of understanding how to learn) is essential in promoting medical student learning,<sup>2</sup> and also in CME. Studies show that

interactive, learner centered, active learning, relevant to the learner's needs has more impact on physician performance or health care outcomes than formal presentation to a passive audience.<sup>3</sup>

To provide CME in Oman, some programs have recently been conducted on regular basis for general physicians' in-service as a series of afternoon lectures. Nonetheless, most programs lack thoughtful design and purpose, and often suffer from low attendance.

Identifying the best local methods for CME is an essential aspect of its design. Also "postgraduate and CME differ from undergraduate education because CME goes beyond increasing knowledge and skills to improving physician competence and performance in practice".<sup>4</sup>

In order to identify the preferred methods for their own CME, an assessment survey was administered among Omani general physicians.

## Methods

### Participants

The study considered a group of in-service general physicians in primary healthcare, with professional experience of no less than five years. Eighteen subjects completed the questionnaire for a response rate of 75%, 17 general practitioners (GP) and one family physician resident. All were voluntary attendees of the organized medical education lecture program for primary health care in the Muscat region of Oman. The physicians were divided in

two small groups of about 15 participants per group. The lecture program spanned four months for each group, with three and a half hour meetings twice a week. Lectures, which were the primary educational tool, were chosen by training and planning committee of the primary health care section to cover important topics in every specialty of medicine. A self-administrated questionnaire was distributed to 24 of the participants towards the end of the program. Six of them were absent on that day.

### **Data Collection**

The questionnaire measures variables in beliefs, attitudes and behaviors in CME. The items of the questionnaire include: CME improve learner practice, the common practice used to deliver learning, and the preferred method for learning which is divided into self directed learning, small group learning or lecture based learning, and combination of methods. The small group learning models included problem based scenario, seminar, open discussion, and workshops. The questionnaire items attempted to assess the participants preferred time either during working or out of working hours, morning or evening time. The following variables were analyzed numerically: attributable data, beliefs, attitudes and behaviors towards continuing medical education program. No formal statistical calculations were performed.

### **Results**

Eighteen subjects completed the questionnaire for a response rate of 75%, 17 general practitioners (GP) and one family physician resident. The majority of those completing the questionnaire 13 (81%) believe that continuing medical education improves their practice.

Regarding the preferred methods of CME, eight (44%) prefer group learning (small group problem-based or workshop), two (11%) prefer self-learning, however, none of them were interested solely in lecture based learning. Eight (44%) preferred a combination of methods. Most GP, 15 (83%) prefer the program included as part of their working schedule in place of morning clinical hours, one (6%) preferred afternoon time and two (11%) prefer special designated CME days replacing regular full workdays.

Most, 16 (88%) of the respondents are involved in frequent medical education programs. Seven respondents attended once a week (43%), six once a month (38%) and the remainder attended less than often. More than half, nine, (56%) of the learning programs are conducted in the local health centers. The physicians receive their CME as follows: in lectures nine (69%); self learning two (15%) and small group activities two (15%).

### **Discussion**

Our literature review focused on identifying the preferred method

of CME among general physicians. Analysis of our local results showed that small group learning was actually the preferred method among these physicians in Muscat, Oman.

Small group learning is classified as a strategy of cooperative learning. It stimulates higher-order thinking processes: "retention; application and transfer of factual information, concepts, and principles; mastery of concepts and principles; problem-solving; creative ability, including divergent and risk-taking thinking; productive controversy; awareness and utilization of one's capabilities; and reflection".<sup>5</sup> Swedish experiences in CME among general physicians indicate small group work is more effective than traditional "lecture-based" education.<sup>6</sup> Interactive CME that enhances participant activity has been shown to improve professional performance and ultimately the health outcome.<sup>3</sup> On the other hand, based on a small number of trials, "didactic sessions do not appear to be effective in changing physician performance".<sup>3</sup> This finding is supported by the responses of our study physicians. Interactive small group education can be provided effectively in practice-based small group.

A Canadian model of practice-based small group (PB-SG) consists of 5-9 physicians,<sup>7</sup> including a trained learning facilitator, who meet together on regular basis for at least 1.5 hours twice a month, eight months a year. The group studies one specific problem using a formally prepared module case description with a set of stimulating questions and a package of pre-identified journal articles. Each problem is adapted from real life practice scenarios.

### **Rationale for the use of practice-based, small group in CME**

The process of learning in medical education has been described by various educators. Many of them base their theories on adult learning principles from Malcolm Knowles.<sup>8</sup> The PB-SG method uses principles of adult learning. Like all adults, doctors learn best when they recognize the need for learning, formulate their own objectives, identify resources and plan methods for using the resources. Furthermore, the collective, cooperative environment in PB-SG creates an effective learning climate.

Four concepts from Harden's et al (1984) learning strategy model SPICES apply well to PB-SG as it is student centered (S), problem-based (P), integrated learning in which the learners discuss the problem from its whole aspects and integrate the discipline team in management (I), and is based on community health issues and screening and prevention (C).<sup>9</sup>

The integration of educational goals and educational theory can be achieved in the PB-SG CME design. Schmidt (1993) has outlined three educational principles from cognitive psychology that are applied in PB-SG.<sup>10</sup> First, the activation of prior knowledge enhances

cognitive activity and engages learner in the task of understanding new information. Dewey argued that knowledge can't actually be transferred but the learner has to actively master it by participation or action.<sup>11</sup> Second, retrieving the new knowledge and information is achieved by elaboration and discussion in a group of learners. Thirdly, the learner is able to extend and improve prior knowledge and provide improved care for future clinical problems. This is achieved while engaging the learners in a common subject and progressively building the subject matter through continued self-directed learning.

Similar to adult learners in many other studies and settings, Omani general practitioners indicate that small group learning is their preferred method. Based on our review of the literature we recommend designing a PB-SG curriculum model for CME in Omani primary health care. It should have the five key characteristics as described by Mast.<sup>12</sup>

"1- the starting point is a problem, 2- the problem is one that a physician is likely to face, 3- the subject matter is organized around the problem rather than around specific discipline, 4-learner assume responsibility for their own education 5- learning occur in small group".

Besides, from an adult education perspective it is seen that the role of a facilitator is another key characteristic that may be added to Mast's enumeration.<sup>8</sup> A facilitator is valuable in assisting learners identify unperceived knowledge gaps, available resources and supporting learning plans and activities. In PB-SG the facilitator is a member of the group but is trained to have a special role in optimizing the group process. We also recommended for an Omani model that small groups have identified and well trained facilitators. Cases can be developed by each group depending on their identified needs or adapted from other programs as Canadian PB-SG if appropriate.

By Self evaluation and identification of the gap between what they know and what they don't know, the Omani GP's can specially design learning plans to resolve the gap and use various resources.

Schön describes this process of reflection by which professionals learn from experience;<sup>13</sup> a surprise in daily practice leads to reflection, experimentation and if successful a change to a new practice approach. Similarly, PB-SG learning enables physicians to solve the clinical problem, modify and share their ideas by "Reflection-in-action" using their knowledge, skills, and attitudes from clinical experience. When an area of "Surprise" is encountered, such as when a case doesn't fit their current knowledge, skills or attitudes; the group searches for additional resources to learn about the area of their ignorance, i.e. "Reflection-on-action". In the Omani GP's

local set-up, an area of "Surprise" could also be explored by inviting specific traditional lectures on the topic from expert specialists. These specially designed lectures could be arranged according to the learner needs. Further, the lectures may enhance the learning process by stimulation of awareness of un-perceived knowledge needs among the learner.

## Conclusion

Medical education is a lifelong process, which can be achieved by various methods. The best methods for CME should be based on educational theories and principles that cater to the learner. For example, interactive collaborative, co-operative small group learning is described in the literature as more effective than traditional didactic methods in providing a stimulating environment that motivates the learners, enhances lifelong learning skills, "and is more fun".<sup>4</sup> It encourages participants to integrate new information in their daily practice.

The Canadian model of practice-based small group learning may also be effective in the Omani context. Delivery of effective CME depends on support from a group of stakeholders, an establishment recognition system, and acquiring resources. These will become further challenges to implement as a next step.

## References

1. Davis D. Continuing medical education. Global health, global learning. *BMJ* 1998 Jan;316(7128):385-389.
2. Ten Cate O, Snell L, Mann K, Vermunt J. Orienting teaching toward the learning process. *Acad Med* 2004 Mar;79(3):219-228.
3. Davis D, O'Brien MA, Freemantle N, Wolf FM, Mazmanian P, Taylor-Vaisey A. Impact of formal continuing medical education: do conferences, workshops, rounds, and other traditional continuing education activities change physician behavior or health care outcomes? *JAMA* 1999 Sep;282(9):867-874.
4. Smits PB, Verbeek JH, de Buissonjé CD. Problem based learning in continuing medical education: a review of controlled evaluation studies. *BMJ* 2002 Jan;324(7330):153-156.
5. Davis D. Continuing Professional Development of Physicians. Chicago, American Medical Association, 2003; 169-185.
6. Eliasson G, Mattsson B. From teaching to learning. Experiences of small CME group work in general practice in Sweden. *Scand J Prim Health Care* 1999 Dec;17(4):196-200.
7. Cottrell K. Innovations making CME more clinically relevant, attractive. *CMAJ* 1997 May;156(10):1449-1451.
8. Kaufman DM, Mann KV, Jennett PA. Teaching and Learning in Medical education: How theory can inform Practice. Edinburgh, ASME, 2000.
9. Harden RM, Sowden S, Dunn WR. Educational strategies in curriculum development: the SPICES model. *Med Educ* 1984 Jul;18(4):284-297.
10. Schmidt HG. Foundations of problem-based learning: some explanatory notes. *Med Educ* 1993 Sep;27(5):422-432.
11. Dewey J. *The Quest for Certainty*. New York: Minton, 1929.
12. Mast L. Application of the problem-based learning model for continuing professional education: a continuing medical education program on managed care issues-Part II. *Am J Manag Care* 1997 Jan;3(1):77-82.
13. Schön D. *Educating the reflective practitioner: toward a new design for teaching & learning in the professional*. San Francisco, Jossey Bass, 1987.