Review Article:

Continuing Professional Development in Health Sector

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Abstract

Programs of continuing education (CE) for health personnel represent crucial challenges for the development of health systems, which are relevant and efficient. Continuing professional development (CPD) is a more complete definition, including medical, managerial, social and personal skills, leading to improvement of the health status and quality of life of the people. Review of the literature based on evidence gives clear guidance for CPD internationally.

During the last two decades, the need for all health personnel to have highly developed learning skills in a society racing with change is evident. the health personnel are forced to continue their learning beyond graduation. Improvement in CE systems has resulted in the formation of CPD in many developed countries. A few of the developing countries implement these programs on a systematic basis, but a national program for continuing education is lacking in nearly all of them. In some of the countries, scientific associations run CE programs; in many, CE programs are available for only a limited number of medical specialties and in other, on-the-job training is available for health personnel on an ad-hoc basis.

The crucial knowledge gaps between current HR practice and the evidence based CE include:

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a) Lack of sufficient evidence and data on the status of CPD and CE in different countries of the world.

b) Uncertainty regarding efficacy of conventional methods of continuing education.

c) Lack of scientific evidence on the appropriate amount, time interval, and method of administration of CPD pogroms in different groups of health personnel.

Based on the available evidence it is recommended to start a standardized information gathering system for CPD and CE activities in all the countries of the world and to publish the results annually (with the same format as used in vaccination coverage reports). Holding regional workshops and seminars on the significance of CPD for health policy-makers and administrators of different countries can result in widespread application of CPD activities all over the world. Research studies, which have been performed on the efficacy of CE, should be extended on a wider scope and the results should be used in devising principles of an effective CPD programs. Application of novel methods of teaching and active learning techniques is recommended. Globalization of CPD can be facilitated through adoption of CE models from countries, which have been successful in the implementation of any of the ten principles of an active CE system.

Keywords: Continuing education, Professional education, Continuing professional development, Asia, Iran.

Introduction

As prophet Mohammad (PBUH) said "Seek Knowledge from Cradle of Grave:, the concept of continuing education (CE) has been promoted in the last few decades to provide the means whereby people can develop to their maximum potential and to improve well-being and to ensure a high quality of life for all.

It is well stressed that the new millennium will be: Knowledge-based". Those who can acquire, understand and apply knowledge will prosper and those who cannot will lag behind (Unesco-Appeal 1997). Therefore, the importance of lifelong learning and CE in all kinds of formal, non-formal and informal education systems in evident.

CE for health personnel represents a crucial challenge for the development of a health system, which is culturally and socially relevant and economically efficient. It is also crucial to the improvement of the health status of the people and to the quality of life in general (WHO-EMRO 1992). Internationally, there is a move from continuing medical education (or clinical update) to continuing professional development (CPD), including medical, managerial, social, and personal skills. There is no sharp division between CE and CPD, as during the past decade CE has come to include managerial, social, and personal skills, topics beyond the traditional clinical medical subjects. The term CPD a acknowledges not only the wide-ranging competences needed to practice high quality medicine but also the multidisciplinary context of patient care (Pech et al 2000). It is also a recognized fact that the management of the health system can be made much more effective if all categories of health personnel undergo CPD and if the supervision of health workers becomes part of the educational process. Appropriate CPD should provide a bridge between basic training and practice. When integrated with supervision,

it helps to raise the standards of health care and leads to more efficient work conditions (WHO-EMRO 1995).

The importance of CE has also been illustrated by imagining what would happen if the health workforce had no access to CE programs after completion of the initial training. the topics which should be considered include:

a) inadequacy if initial training for provision of optimal health care
b) forgetting and deterioration of skills with time

c) negative influences present in everyday clinical practice

d) ignorance of developments in health care techniques. Taking these four lines of argument together, there can be no doubt that effective provision of CE is absolutely essential in any health care system (Abbatt F. Principles and prospects).

The aims of participation of health care techniques. Taking these four lines of argument together, there can be no doubt that effective provision of CE is absolutely essential in any health care system (Abbatt et al 1998).

The aims of participation of health personnel in a CE program are: to acquire new knowledge and skills, to improve ability to provide professional service, to interact with and learn from colleagues, to enhance benefits and promote job security, and in short to serve their profession more effectively.

Types of CE activities

Continuing education is any activity or event, which is designed to improve the knowledge, skills or attitudes of health workers. A consultative meeting on CE arranged by the World Health Organization at Stringer in 1983 (Abbat 1998.) gave comprehensive list of activities: the revision of which is presented in Table 1.

CE activities may be divided into three categories (Pech 2000a) "Live" or external activities (courses, seminars, meetings, conferences, audio and video presentations),

b) Internal activities (practice based activities, case conferences, grand rounds, journal clubs, teaching, consultation with peers and colleagues)

c) "enduring" materials (print, CE ROM, or web based materials).

International systems for professional development

In most countries there is some kind of CE system. Aside from international seminars, gatherings and workshops, in various countries of the world, CE programs may occur in three levels: national, specialty organization and state. The CE system consists of all the organizations and people who are involved in managing and providing CE, the relationships between the organizations and people and the regulatory or legislative framework within which they work. The traditional systems have only covered medical doctors and specialists, but the modern concept of CPD applies to nonmedical personnel who are involved in health care and numerous CE programs have been developed for dentists, pharmacists, nurses, midwives and other health personnel, of which the nurses CE programs are more developed, approved and accredited. Despite all differences between CE programs of various disciplines in medical professions,

the principles of processes and outcomes of CE activities remain fairly close; therefore, in this writing we have mostly focused on CE programs of physicians.

In many countries, the relationships are weak and poorly defined. There is inadequate understanding of the concept of CE as an opportunity to engage in lifelong learning, inadequate appreciation of the role of CE in personal and socio-economic development, poor co-ordination and lack of networking among the varied agencies providing CE, and low level of Co-operation between government agencies, non-government agencies and the private sector in the provision of CE. The consequence in that the actual continuing education, which takes place, is piecemeal and fragmented. Inevitably the impact of CE on the way in which health care is provided in this type of system is limited. In some countries, the relationships are clearer and there is much greater co-ordination. Here the impact is greater. In this kind of situation one can define a National Training Activity (NTA) or a National Progran of Continuing Education (NPCE). This does not mean that all activities are implemented by a single organization, not that there is a single source of funding; it merely meals that funds and activities are coordinated towards achieving a common purpose in an effective way.

There exist systems for professional development in many developed countries. In Europe, there is a diversity of systems operating for CPD. Save for Netherlands; no European country has followed the US model of examination or rectification (Good CPD Guide 1999). However variable incentives are introduced by Belgium, Norway, Italy, Luxembourg, Portugal and United Kingdom (Pech et al 2000). In Canada, the maintenance of competence program and innovative self-learning programs encourage clinicians to manage their own CE. Specialists are required to report their activities for CPD every five years (Royal college of physicians 1999). Continuing medical education in the United States in closely related to rectification (American medical association 1999). Rectification may be required, for example, by medical societies and associations, health maintenance organizations, insurers, and partners in medical practice. Programs in Australia and New Zealand are managed by the respective medical colleges and faculties and provide self-directed learning for CPD members (Royal Australian college of physicians 1999). Available information on CPD in developing countries are scarce (Mostafa 1997, Azizi 1999a) and mostly related to physicians. Most activities are on ad-hoc basis and do not operate within a specific framework of national plan. Countrywide program of CPD has been reported in some of developing countries for all health personnel (Moustafa 1997) or for defined specialties (Lejarraga et al 1998).

Effectiveness of a CE program

There are two major aspects of continuing education, which determine whether it is successful, or not. The first is the quality of the CE activities themselves; the assessment of needs, the teaching methods used, the design of the course of individual session, the quality of the teaching learning materials, and the techniques used by the teacher of facilitator. These factors determine how much is learned during the CE activities.

The second aspect is the context or system in which the CE activities take place. It is, in general, the context or system, which determines whether

learning during a CE activity is translated in improved work performance in the field situation.

It should be recognized that health personnel learn as adults, and their learning occurs within the context of their past experience, their present practice situation and their ideals regarding what they should know. Therefore, their learning occurs as they live their lives, work in particular organization settings, and respond to technical challenges and professional norms. In short, learning experiences of adults are best organized around real-life situations rather than subject-matter units. Attention to the principle of adult learning, which reflects practical day-to-day concerns of participates, has provided changes in CE programs with great improvements over traditional, non-interactive forms of CE.

Evaluation of a CE program

According to WHO definition a national training activity (NTA) is a measurable short-term educational activity, relevant to priority health needs, carried out within a country, which aims to upgrade the knowledge, skills, and attitudes of the participates, improves health care delivery, and builds up the capacities of health and health-related personnel at all levels of the health care system. Evaluation of a CE program must be directed towards continuous quality improvement framework, which assesses both process and outcome of CE. This may be directed towards the change in knowledge, attitude and practice of participants or towards complete assessment of effectiveness of CE system.

Evaluation of the participants

Different methods have been used for evaluation of participants in continuing education systems, including administration of pretests and posttests to assess the change in knowledge of the participants, and evaluation of the performance of the health workers after participation in the CE program. Although these two methods have been widely used for evaluation of effectiveness of CE programs in different settings, some concerns have been raised about their optimal function, because the results of the former approach is shown to be inconsistent with the practice of participants in the field, whereas the latter is influenced by numerous factors other than CE program input and therefore can not be a reliable indicator of the efficacy of the program (Davis et al 1995).

Evaluation of the CE system

Accreditation and approval for CE programs have been developed in national, specialty organization and state levels in many countries. This does not guarantee quality programming, but it conveys a message that the sponsor values accountability. Conflicting pieces of evidence exist about CE of health personnel in the current literature (Davis 1995, Bero et al 1998). It has become evident that didactic sessions o traditional CE activities such as lectures are not effective in changing physician performance (Davis et al 1999). However, the interactive CE sessions that enhance participant activity and provide the opportunity to practice skills certainly bring about change in professional practice and, on occasion, health care outcomes. In other words, if CE activities are properly structured, they can become powerful means to enhance health personnel's lifelong learning and commitment to medical professionalism. Abbatt has proposed eight principles for effectiveness of a CE program (Abbatt 1998). We have

slightly modified Abbatt's principles by addition of two other principles (Azizi 1999b) (Table 2).

Observations

The author has reviewed CE programs in two countries of eastern Mediterranean region of WHO, and has used the Abbatt-Azizi principles to evaluate both systems. As mentioned earlier, CE programs in developing countries have mainly focused on medical personnel (GPs and specialists). Therefore CPD programs for paramedical personnel are not comprehensively reviewed here.

National training activities in the Islamic Republic of Iran

Although CE has always been recognized as an essential strategy for maintaining the effectiveness and high quality performance of all categories of health personnel, the first continuing Education for Health Professionals Act was passed in 1991 to 1996, the act covered the following five categories of health personnel; physicians, pharmacists, dentists, laboratory specialists and public health physicians. In April 1996, the act was made permanent, covering all other categories of health personnel, notably nurses, midwives, laboratory and X-ray technicians, dental technicians, optometrists, and many others. It is now mandatory that all health personnel undertake approved CE programs as a prerequisite for relicensing.

The act also established a national council and provincial councils for CE and entrusted these councils with the planning, conducting, and evaluating all CE programs. The unique feature of the Iranian health care system that has helped the development of CE system is the integration of medical education and health services in one ministry.

In 1985, after considerable discussion and debate, the Ministry of Health and Medical Education was established. This merger has undoubtedly benefited the two systems and has resulted in the production of new categories of health personnel who are well trained and sensitive to community health needs (Azizi 1997). The backbone of the system is a network of heath houses and primary health care centers (rural and urban) that provide basic health care services at the community level. Health houses and primary health care centers are supported by district health centers and district hospitals. The regional health organization supervises co-delivery of health services at the provincial level. In all provinces, the chancellor of the medical university is also the executive director of the regional health organization. At the national level, the Ministry is in charge of policy-making and overall planning and leadership, and also supervises the regional health organizations and universities of medical sciences and health services (Marandi 1996).

The integration of education and delivery of service and the enactment of the law concerning CE are essential backbones of the Iranian health care system. The creation of a department of medical education and the subsequent organization of activities at the university level are important positive features of the program (Mostafa 1997). More than 2000 continuing education activities occurred between 1991 and 1996, and analysis had shown that the numbers increase year after year (Table 3).

In order to evaluate the effectiveness of this system, Abbatt-Azizi principles were applied to evaluate the CE program in I.R. Iran (Table 4).

Considering that national CE activities started in Iran about 9 years age, achievement of such a high score would be considered a remarkable success of the program. Certain deficiencies exist in needs assessment, using state-of-art educational techniques, and evaluation of the impact and outcome of the programs. There is a need to introduce more innovations into the teaching methodology used in many training activities, i.e. to deviate away from the lecture-type training and use recent approaches in education such as case studies, problem-solving and self-learning methods. Advantages and strengths of this program should be used as a model for formation of national CE programs in other countries.

The status of CE in another country of the region (name not stated)[2]

In this country, the Ministry of Health has recognized the importance of on-the-job training and has increased the number of such activities in recent years. But it has been observed that most of these activities were performed on an ad-hoc basis and did not operate within a specific framework or national plan. There are no uniform guidelines, administrative or legal basis to control the process of continuing education at a national level. Additionally, participation in CE programs in voluntary and therefore no clear incentive exists for health personnel to undertake continuing education at any point in their professional career. Participation in continuing education programs in by no means a prerequisite for career development, professional advancement, or renewal of medical practice license. The Ministry of health has not dedicated a separate budget line for continuing education, and adequate funding is usually available from WHO and other international and non-governmental organizations. Abbatt-Azizi principles were used to evaluate the CME program in this country and the results are shown in Table 5.

Conclusion:

CPD has been viewed as an effective mean of successful management of any health system and mandatory professional development programs are employed in many countries internationally. Appropriate CE could support the effectiveness of health personnel in challenging circumstances. However, a critical evaluation of the relevance and effectiveness of CE programs in the field of public health practice is essential. While the importance of CE has always been recognized, the need for it now is more crucial in order to respond to unprecedented challenges resulting from new health problems, new technology, and a completely different health scene. The rapidly increasing cost of health care and higher public expectations are additional pressing factors. In economic terms, investment in CE is an assurance that the investment in basic education will bear fruit. With all advantages of CPD, its effectiveness depends on many factors. The impact of CPD may be improved by applying principles that ensure the appropriate change in knowledge, attitude and practice of health workers, Including not only physicians but also the whole range of health personnel who are involved in provision of health care services to the community.

[2] - The author has served as WHO consultant while reviewing CE programs of this country and he is not allowed to publicly disclose gathered data. Therefore this country is introduced as an anonymous country.

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References:

Abbat F, Mejia *A. Continuing the education of health workers,* WHO, Geneva. 1998.

Abbatt F. Principles and prospects for continuing education in the health sector. *Symposium on improving continuing education for health personnel in the region. Tehran, Islamic republic of Iran.* 16-19 August 1998.

Abbatt F.Guidelinesforthe development of national programs of continuing education for health personnel. Symposium on improving continuing education for health personnel in the region. WHO-EMRO. Tehran. I.R. Iran. 1998. August 16-19.

American medical association. The physician's recognition award. Chicago; AMA.1999.

Azizi F. Evaluation of continuing medical education in I.R. Iran. *Journal of medical council of Islamic Republic of Iran*, 1999; 16, 304-310.

Azizi F. report on national training activities for continuing education in Sudan. WHO-EMRO. November-December 1999.

Azizi F. The reform of medical education in Iran. *Medical education* 1997; 31: 159-162.

Bero LA, Grilli R, Grimshaw JM, and Harveye, et al. Closing the gap between research and practice; an overview of systematic reviews of interventions to promote the implementation of research findings. British medical journal. 1998; 317: 465-468.

Davis D, O'Brien MAT, Freemantle N, Wolf FM, et al. Impact of formal continuing medical education; do conferences, workshops, rounds, and other traditional continuing education activities change physician behaviors or health care outcomes. JAMA. 1999; 282: 867-874.

Davis DA, Thomson MA, Oxman AD, Haynes B.Changing physician performance. A systematic review of the effect of continuing medical education strategies. *JAMA. 1995. 274: 700-705.*

Grimshaw JM, Russell IT. Effects of clinical guidelines on medical practice; a systematic review of regroups evaluations. Lancet. 1993; 342: 1317-1322.

Harden RM Laidlaw JM. Effective continuing education. *The CRISIS criteria. Medical education.* 1992; 26: 408-422.

Joint center for education in medicine. Good CPD guide. *Sutton, Surrey; reed health care. 1999;23.*

Lejarraga H, Ageitos MI, Galli A, Castro C. a countrywide program of continuing professional development in Argentina. Argentina society of pediatrics, subcommittee of continuing pediatric education. Archives of diseases of childhood. 1998; 78: 562-566.

Marandi A. Integrating medical education and health services. The Iranian experience. *Medical education.* 1996; 30: 4-8.

Moustafa At. report on continuing medical education in the Islamic republic of Iran. WHO. EMRO. July 1997.

Pech C, McCall M, McLaren B, Rotem T.Continuing medical education and continuing professional development; international comparisons .British medical journal, 2000; 320:432-435.

Royal college of physicians and surgeons of Canada. 1998. *annual report of the royal college of physicians and surgeons of Canada.* Ottawa; RCPSC. 1999.

Royal Australian college of physicians. Review of the maintenance of professional standards program, 1999. *(Internet communication.* October 1999. www. racp. edu. au).

UNESCO-APPEAL. Challenges of education for all in Asia and the Pacific and the APPEAL response. *UNESCO principal regional office for Asia and the Pacific.* Barykih, 1997.

WHO-EMRO .Meeting report on developing a national system for continuing education for health personnel. Alexandria, Egypt, 24-27 July 1995.

WHO-EMRO. Report on the first regional meeting on continuing education for health personnel. Tunis, Tunisia, 1-4 June 1992.

Table 1. Comprehensive list of activities in continuing education of the health workforce*

on-the-job-methods	Off-the-job-methods
Health care audits	Distance learning
Job rotations	Academic studies
In-service training	training courses
On-site supervision and guidance	Self study
Journal article review club	Guided studies
Team assignments and projects	Seminars and workshops
Review of patient records, monthly reports	Conferences
Colleagues	Meetings of professional organization
Telephone conferencing	Meetings of scientific societies
Staff meetings and conferences distance learning	Computer software, Internet

*- Adapted from Abbatt 1998

Table 2. *The principles of an effective continuing education system* *

No.	Definition
1-	There should be a national policy on CE; *The policy of CE would be more effective if it were written and agree*
2-	There should be a single agency with overall responsibility for managing CE: *This should be structured with extended capacity, power, control, and compatible planning of budgetary cycles.*
3-	There should be a network of partner organizations with clearly defined roles; *This is needed to prevent fragmented and ineffective implementation of CE activities.*
4-	The amount of CE should be appropriate; The total amount of CE, the distribution of opportunities between various cadres of health worker and the distribution within each cadre should be appropriate
5-	The objectives of the CE must be prioritized and stated in terms of improved work performance; *National health care priorities and day-to-day performance of health personnel should affect the CE programs.*
6-	The capacity to develop materials and implement CE activities should be matched to the need; *The capacity to provide the necessary quantity of CE and the quality of CE courses must be under constant development and revision*
7-	The innovative, active and appropriate methodology of education should be employed; *Motivating factors to stimulate the desire to engage in learning process, using problem-based learning approach and principles of adult education are all essential for a successful CE program.*
8-	CRISIS (convenience, relevance, individualization, self-assessment, interest, speculation and systemic) should be considered in CE program (20)
9-	CE should be linked to management/supervision support; *People who directly employ, manage and supervise health personnel should be fully involved in CE activities.*
10-	CE activities and the overall system of continuing education should be regularly evaluated; *Evaluation of CE programs and search for creative and beneficial ways to assess educational activities considering both process and outcome variables are essential for effectiveness and improvement of CE programs.*

*-Revised from Abbatt 1998
† From Harden and Laidlaw 1992.

Table 3- Continuing education activities in the Islamic republic of Iran. 1991-1996.

Type of activity	Number
All programs	2140
No. of participants	428000
No. of locations	190
Composed programs	735
Seminars and congresses	627
Workshops	392
Preventive	227
Research methodology	39
Educational	126
Conferences	275
Short-term courses	117

Table 4- *Evaluation of CE program in I.R. Iran using Abbatt-Azizi principles*

No.	Principle	Score *
1-	National policy	10
2-	Responsibility	9
3-	Network of CEHP **	9
4-	The amount and extent of CEHP	10
5-	Priorities	6
6-	Appropriateness	7
7-	Methodology	4
8-	CRISIS	7
9-	Support by the government	10
10-	Evaluation	5
Total		**77**

*- For each principle scoring of 0 to 10 was used.
**- Continuing Education for Health Personnel.

Table 5- Education of CME program in a country of Eastern Mediterranean Region

1- Principle	Score*
2- National policy	4
3- Responsibility	3
4- Network of CEHF†	3
5- The amount and extent of CEHIP	4
6- Priorities	3
7- Appropriateness	3
8- Methodology	1
9- CRISIS	1
10- Support by the government	5
11- Evaluation	1
Total	**28**

*For each principle scoring of 0to 10 was used
†Continuing education of health personnel