

# COMPARATIVE ANALYSIS OF MEDICAL WORKERS

MARIJA LUGONJIĆ

University »Union-Nikola Tesla«, Faculty of Business Studies and Law, Beograd, Serbia,  
e-mail: marija.lugonjic@gmail.com.

**Abstract** Continuous Medical Education (CME) is becoming a minimum condition for adapting to today's changes and achieving success in professional and personal fields. The aim of this paper is a comparative analysis of CME in Serbia, the European Union, and the United Kingdom; US, Russian Federation and Iran. The aim of this comparative study was to assess the main country-specific institutional settings applied by governments.

**Methods:** A common scheme of analysis was applied to investigate the following variables: CME institutional framework; benefits and/or penalties to participants; types of CME activities and system of credits; accreditation of CME providers and events; CME funding and sponsorship. The analysis involved reviewing the literature on CME policy.

**Results:** The US system has clear CME boundaries because it is implemented solely by credentialed institutions that organize dedicated meetings with the clear purpose of educating medical professionals. The European Union has not yet been able to reconcile the differences it has inherited from its members. Only "general" conditions are defined. Continuing medical education cannot be arbitrary, like any other organizational process. Everything has to be controlled in advance. Education in the Russian Federation is regulated by the law, Art. 2 and must be viewed as a whole. Doctors and healthcare professionals and their associates earn points through accredited continuing education programs for obtaining and renewing licenses of the Serbian Medical Chamber and KMSZTS - Chamber of Nurses and Health Technicians of Serbia. The Ordinance establishes the conditions for issuing, renewing and revoking the license for independent work, ie. License to Healthcare Professionals. (RS Official Gazette 102/2015)

**Conclusion:** This comparative exercise provides an overview of the CME policies adopted by analyzed countries to regulate both demand and supply. The substantial variability in the organization and accreditation of schemes indicates that much could be done to improve effectiveness. Although further analysis is needed to assess the results of these policies in practice, lessons drawn from this study may help clarify the weaknesses and strengths of single domestic policies in the perspective.

**Keywords:**

medical workers,  
continuous  
medical education,  
participation of  
patients.

## 1 Introduction

Education plays a significant role in every society, because through education, society influences the future of the youth generation. This confirms to us that education is grounded in the history of knowledge and the history of society. The state determines social norms and values through education. Thus, by educating its citizens, it aims to strengthen fairness, tolerance, equality and constructive communication, thus incorporating the perspective of continuing education. Promoting continuing medical education means advancement of medical practice and maintaining of licenses. However, university professors, their students, and all employed healthcare professionals have difficulty with the definition of the concept as such. By comparing the continuing professional development of physicians and their associates, we realize that this is not easy especially at the international level. Professional responsibility is crucial for physicians to improve their knowledge, practice and skills because their patients expect it.

CME Continued Medical Education of physicians and their associates is an encouragement of personal, professional and scientific potential for the health care of society as a whole.

Continued medical education must be in accordance with MCI Medical Instruction (training) - medical regulations and training of health care professionals. That is why the question is rightly asked: "Should CME programs be compulsory or voluntary?" The quality of medical education is under the watchful eye of patients worldwide.

CME is the maintenance of professional competence in a society characterized by rapid change and by overload of imposing public and personal expectations and demands. Medical students and other medical professionals are provided with a course of study and education, but upon completion of their education, every doctor is responsible for his lifelong learning. The physician should be encouraged to take the initiative to increase personal and social awareness, with a critical focus on the set and achieved goals.

Lately, the emphasis has been placed on the quality of the program, which must be more inclusive for CPD - Continuous Professional Development. This program should provide latest knowledge, up-to-date treatment techniques that should be

communicated to physicians and their associates who will apply them in their daily practice.

The most widespread way of transferring knowledge is through seminars, expert meetings in which, depending on the level and scope of knowledge, they earn points that are recorded with previously earned points over a period of time. All physicians and medical technicians are required to collect a certain number of points over a period of time so that they can perform their medical practice.

This coordination at the international level is very difficult. This role was given by the Liaison Committee of Medical Education LCME 2004 when it approved accreditation standards, which should promote the flexibility and innovation in learning required for continuing physician education.

For many centuries people have wanted to improve and maintain the quality of medical performance. For instance, from 1300 to 1801 the Venice government required all licensed practitioners in the city to attend annual refresher courses in anatomy (Ell, 1984). The need to keep clinical competence up to date has become more and more important in recent decades since biomedical science has progressed with a speed never seen before. While the benefits of rapid technological development for society are obvious, fast innovation inevitably implies the need for continuous updating by health professionals, who are ultimately responsible for making scientific discoveries available to the population.

In this context, Continuing Medical Education (CME) programmes, i.e. “educational activities which serve to maintain, develop, or increase knowledge, skills, professional performance, and relationships that a physician uses to provide services for patients, the public, or the profession” (ACCMEE, 2008), have been rapidly increasing in many developed countries.

Although the idea that doctors should attend CME programmes on a regular basis is not questioned, the debate on modalities is still wide open [Ratanawongsa, et al. 2008; Davis, Thomson, Freemantle, Wolf, Mazmanian, Taylor, 1999; Wass, Cantillon, 2008; Shannon, 2008). Questions on whether and to what extent current CME programmes improve physicians’ performances and health care outcomes are hard to answer, because of the weaknesses in the reported validity and reliability of

evaluation methods. The accreditation of medical education companies and the way CME courses should be organized and financed arouse controversy too (Steinbrook, 2005; De Angelis, 2005)). In many countries funding mostly stems from commercial support by pharmaceutical companies and medical device manufacturers (Steinbrook, 2005), casting doubts on their real educational function (Relman, 2008). Debate is intense and proposals flourish for CME without commercial support (Garattini et al. 2010; Fletcher, 2008; Moynihan, 2008; McCatthy, 2007), to accredit only non-profit organizations distant from commercial interests (Woolard, 2008), or to strengthen educational governance in order to control industry-sponsored CME (Morgan, Stokx, Zannad, 2005; AAMC, 2008).

Compared to the USA, the situation in Europe is complicated by factors such as different languages and the mixed roles of public authorities and medical associations (Garattini et al. 2010). A major concern is the lack of common European rules and quality criteria for CME (Garattini et al. 2010).

## **Method**

The analysis focused on CME policy in analyzed countries. We selected the countries according to the following variables: CME participation (compulsory or voluntary), population density (low or high), and location (north or south).

Analysis was applied, in order to investigate the following variables: CME institutional framework; Benefits and/or penalties to participants; Types of CME activities and system of credits; Accreditation of CME providers and events; CME funding and sponsorship.

The analysis involved: reviewing the literature on CME policy in national and international journals; interviewing a selected panel of local experts in each country, comprising at least one public manager, one representative of medical associations.

## **2 Comparative analysis**

### **2.1 USA**

The Accreditation Council of Graduate Medical Education ACGME in the USA recommends that a certified program must be maintained i.e. that doctors are to be included in the education program for life.

In the USA, it is clear, those who want to pursue medicine professionally, must and should improve and invest in themselves. Professional or not, there is no choice. Only those who accurately meet the KME requirements have a place among professional physicians. The cost of KME is borne by physicians, whether they are attending a study program at a university, college, school or other well-known place of education. This is the only way in the USA for doctors to improve their qualifications.

### **2.2 EUROPE**

The European Union has not yet been able to reconcile the differences it has inherited from its members. Only "general" conditions are defined. In the European Union of Medical Specialists - UEMS there are still significant differences between individual EU members today. The full members of the alliance are: Austria, Slovenia, Finland, Ireland, Netherlands, Czech Republic, United Kingdom, Greece, Lithuania, Portugal, Spain, Belgium, Denmark, Hungary, Italy, Slovakia, Cyprus, Germany, Iceland, Luxembourg, Norway, France, Sweden, Estonia, Latvia, Poland, Switzerland and Malta. Associate members are: Turkey, Romania, Croatia, Azerbaijan, while Israel is the observer country.

The European system allows each i.e. any scientific or professional meeting to be part of the KME system. In Europe, the involvement of doctors and healthcare professionals is voluntary. The European Union of Medical Specialists, with the Committee of European Physicians, have adopted the Licenses. This means that physicians have an ethical obligation to renew them in a certain period of time, usually five or seven years.

Over time, it is recognized that "moral responsibility is insufficient."

The US system has clear KME boundaries because it is implemented solely by credentialed institutions that organize dedicated meetings with the clear purpose of educating medical professionals.

### **2.3 Iran**

Hamedan University of Medical Sciences Iran – Self Learning Module SLM.

According to the results, the use of the SLM module can help pupils and students to improve the quality of clinical competence. Medical technicians should be properly guided, presented in the right way, with the opportunities and benefits of self-continuing education modules. SLMs - are designed for independent learning. They are characterized by the flexibility, accessibility, portability and ease of the program. They motivated students to work and learn more. The SLM Self-Study Module program has proven to be economically viable.

The modules contained basic presentations, videos that had the advantage of repeating more than once. Additional resources were books, website addresses, as well as mailing addresses and telephone numbers that were essential to clinical skills. The interactive components are designed in order to be more efficient. (2)

Despite this, training in medical education has come across an obstacle here in the form of CAI - Computer Assisted Instruction. Computer training has remained a barrier to widespread use. It is recommended that CAI be an adjunct to traditional teaching - face-to-face. All this may be a suggestion for further research.

It is important for healthcare professionals to be able to manage information systems, the basic concept of the system, controlling access to the system, the importance of data confidentiality, and patient privacy policies.

ECDL European Computer Driving License Standard Module - Use of the health information system is intended solely for employed healthcare professionals who are connected in any way to patients, for their information from physicians, and for nurses employed in wards including liaison with administration.

Successful mastering of this module by all healthcare professionals has the effect of improving professional education.

The use of the Health Information System is fully in accordance with the ethics, rules and regulations prescribed by the Ministry of Health of the Republic of Serbia.

## **2.4 The Russian Federation**

The national health care in the Russian Federation in modern conditions follows specialist doctors and is directly responsible for increasing the level of work and quality of patient care.

The research was conducted by the First Moscow Institute for Professional Education I.M. Sechenov- Ministry of Health of Russia. IMS is a system of continuous medical education, which is based on a professionally significant increase in the role of physicians in self-education in modern conditions. 56 experts from different medical fields and specialties participated in the research. The physicians who lacked the necessary conditions accounted for 29%. The physicians who regularly took the time to monitor vocational training to increase professional competence accounted for 73%. The physicians who were actively involved accounted for 32%. The main source of continuing medical education is the study of medical literature 71%. As many as 88% could not answer how to plan this in advance and what activities to take.

In 2009 Kuruukhin provided data in his doctoral dissertation study: only 63% of physicians read medical - special literature. The main sources of new professional information, in 70% of cases are seminars and conferences held in their city, 66% follow advanced training programs, while 8% of doctors write and publish an article in a scientific journal during the year.

Educational activities include seminars, conferences, publication of scientific articles, development and training for the introduction of new diagnostic methods. Practical training sessions are held at the simulation center or in the workplace through internships.

The right to carry out medical activities in the Russian Federation is regulated by Law 323 - FZ. During five years of independent professional activity, a health care professional collects points that represent accumulated professional activities in the NMO - physician training system. The law obliges them to be attentive, honest and caring to patients during their professional activities and to show respect for every human life, keeping a medical secret. They should show gratitude and respect for the mentors, be friendly to their colleagues and more demanding to the students, to preserve and develop a noble tradition of medicine.

It is planned to establish a minimum standard of educational activities within five years and 250 points. Doctors must earn 50 credits per year in advanced training programs. In the fifth year, medical professionals undergo certification training. Continuing medical education cannot be arbitrary, like any other organizational process. Everything has to be controlled in advance. Education in the Russian Federation is regulated by the law, Art. 2 and must be viewed as a whole.

The recommendation is: to allow and organize continuing education for physicians in the workplace, equip them with professional literature, and libraries must be equipped with computers with Internet access.

## **2.5 The Republic of Serbia**

The distinction between accreditation and a doctor's license is often not understood. It is very important that a health care institution, whether primary, secondary or tertiary level of health care, whether in the private or public sector, possesses an independent accreditation for its independent work and that doctors and healthcare professionals are licensed.

Accreditation of a health care facility is recognition and verification that explicit legal standards are met. These standards follow the patient's treatment process from the moment the patient is admitted to the healthcare institution, through the planning and implementation of treatment until the end of treatment. Accreditations are given for a period of 1,3,5 and 7 years, because in this way it is expected to improve the system and quality of work.



Doctors and healthcare professionals and their associates earn points through accredited continuing education programs for obtaining and renewing licenses of the Serbian Medical Chamber and KMSZTS - Chamber of Nurses and Health Technicians of Serbia. The Ordinance establishes the conditions for issuing, renewing and revoking the license for independent work, ie. License to Healthcare Professionals. (RS Official Gazette 102/2015)

The Chamber issues a License to a health professional who is a member of the Chamber and who has passed the professional exam. The license renewal process requires the health care provider to earn 140 credits through accredited programs during the KME continuing medical education process. The program must be related to the professional activity that the health care professional performs, ie. renews the License.

Revoking of the License may be temporary or permanent. The competent chamber may temporarily revoke a license of a healthcare professional in the event that: the health care provider has not renewed the license according to the prescribed law, or in the case where the healthcare professional has made a professional mistake or breach of professional duty.

Permanent revocation of the License may be in the case where the health care provider's Licence is revoked by a court decision because of a serious crime against human health.

### **3      Wikipedia**

Wikipedia is a website whose quality and reliability have often been called into question. Wikipedia has been used by doctors-clinicians for informal self-education and decision-making.

Going back to the days before the Internet, the only sources of information for doctors who needed quick information were medical textbooks, scientific journals and colleagues. In these cases, there was a problem with the date of publication and obsolescence, as well as confronting expert opinions among colleagues.

Yet human nature is such that it goes along a line of less resistance. Discussions regarding Wikipedia and the medical profession as non-formal education have often been mentioned in the circles of healthcare professionals. Some pages were very serious and edited and supplemented by university professors and their students. Some were very frivolous and even "dangerous" because they were read by patients without medical knowledge.

Meanwhile (there is research evidence) it has been confirmed that attitudes in academic community towards Wikipedia are changing. Four universities in the state of California have a more favorable attitude towards Wikipedia. Regardless, all healthcare professionals and patients, even healthcare professionals, need to be careful when using Wikipedia.

Huberst and others from Norway sought to evaluate the extent to which medical students from Germany, Austria and Norway had used Wikipedia. Were they making mistakes? How did they evaluate the quality of the data input? Did they compare their knowledge with Wikipedia?

97% of students found errors, 65% of them did not know how to check and analyze data quality, while 15% of students allowed inaccurate information to remain unchanged. (MEDJ\_4\_15.pdf)

Students used Wikipedia as a starting point. They knew they needed to check the facts, aware that mistakes could occur.

Medpedia has proven to be an attempt at having a specialized website, specially designed and arranged by clinician physicians. It has never reached the popularity and size of Wikipedia because Wikipedia is easy to read, easy to access, used by a large number of people and information is not taken as 100% accurate.

#### **4 What do patients really want from doctors?**

Communication in healthcare requires knowledge, competence and technical skills, which implies continuous learning - continuous education.

Physician - patient communication and treatment is a prerequisite for a quality relationship that has a significant impact on the course and outcome of treatment. Certain rules and techniques have been prescribed in order to establish and maintain good communication. It is important for the patient to have confidence in medical professionals.

Successful doctor - patient communication technique:

- Active listening to the patient, because one of the preconditions for understanding is the way the patient is heard. The doctor focuses fully on the patient, demonstrates his understanding, gives the right feedback for the patient to understand, makes the information as accurate and reasonable as possible for the patient. Testing - one of the most important skills of active listening. The doctor must also be prepared to remain silent in the conversation.
- Explanation - is a technique in communication that involves asking questions between interviewees to clarify and extract important information and treatment details. The doctor should avoid professional terms and expressions so that the patient can understand him best.
- Paraphrase the patient.
- Summarizing physician-patient communication covers the most important parts of the conversation and the feelings that have arisen during the interview. This should give the patient the opportunity to correct the doctor if he summed up something wrong during the conversation.

However, certain barriers are insurmountable, such as education, culture and even social differences. Physicians and their associates anticipate the needs of current professors, including researchers and associates, leaders and clinicians from various fields of health. They form teams that deal with groundbreaking research and evolving standards. Physicians are expected to be committed to promoting health and healthcare worldwide.

Medical education for health care professionals holds a special place because it represents a better path of communication and encourages the patient's confidence and motivation for healing. (Continuing Medical Education and WHO European Health Care Reforms; Ljubljana Charter of Health Care 1996) and (Regulation – on - KME 2019)

## **5 Conclusion**

Patients, wherever they may be, expect their physician to be attentive, truthful and honest in their professional work, to show respect and care for patients' life and health. Physicians are also expected to be friendly to their colleagues, correct to

associates so that they can continue to develop the nobility of medical science together.

KPR – Continuous professional development is becoming an imperative of modern medicine.

CME must be well planned to meet the needs of physicians and their associates. Medical colleges and social community should improve the quality of work and education. It is necessary to link more programs to the workplaces of doctors and their associates. This way of working becomes visible to patients, and it is well planned, without wasting time and additional resources.

It has been proven in practice that the diagnosis and treatment of patient is not a scientific experiment in which all initial conditions are controlled, but most aspects deviate from theory. Expanding the boundaries of health care through continuing health education is a new criterion in the advancement of treatment and care for the patient.

Physicians should actively involve patients in decision-making in their daily clinical work, as the decision and outcome of treatment depends in part on the patients. The joint physician-patient decision versus physician's decision on behalf of the patient is gaining increasing importance in healthcare.

That is why we need to help doctors because they face major challenges, such as poor health literacy, and with some patients gender equality because traditionally there is no possibility of autonomous decision.

Managers should provide and form teams for physician motivation programs, for mastering new programs and training.

In conclusion, this comparative exercise provides an overview of the CME policies adopted by analyzed countries to regulate both demand and supply. Although further analysis is needed to assess the results of these policies in practice, we believe that lessons drawn from this study may help clarify the weaknesses and strengths of single domestic policies in the perspective of pan-European CME harmonization. The substantial variability in the organization and accreditation of schemes indicates that much could be done to improve effectiveness. Rather than striving solely to

find yet more advances in knowledge, we should spend more of our time considering how to apply existing knowledge to the benefit of patients.

## References

- Accreditation Council for Continuing Medical Education (ACCME). <http://www.accme.org/index.cfm/fa/Policy.policy/Policyid/16f1c694-d03b-4241-bd1a-44b2d072dc5e.cfm> [accessed October 27, 2019].
- Association of American Medical Colleges (AAMC). Industry funding of medical education. Report of an AAMC task force. [https://services.aamc.org/Publications/index.cfm?fuseaction=Product.displayForm&prd\\_id=232&prv\\_id=281&cfid=1&cftoken=05927BA4-0E01-4734-A20706588D8D00E6](https://services.aamc.org/Publications/index.cfm?fuseaction=Product.displayForm&prd_id=232&prv_id=281&cfid=1&cftoken=05927BA4-0E01-4734-A20706588D8D00E6); 2008 [accessed December 22, 2019].
- Davis D, Thomson O'Brien MA, Freemantle N, Wolf FM, Mazmanian P, Taylor-Vaisey A. Impact of formal continuing medical education. Do conferences, workshops, rounds, and the traditional continuing education activities change physician behaviour or health care outcomes? *The Journal of the American Medical Association* 1999;282:867–74.
- De Angelis C. Rainbow to dark clouds. *The Journal of the American Medical Association* 2005;294:1107.
- Ell SR. Five hundred years of specialty certification and continuing medical education. Venice 1300–1801. *The Journal of the American Medical Association* 1984;251:752–3.
- Federal Electronic Medical Library (<http://193.232.7>)
- Fletcher S. Pharma and CME: view from the US. *British Medical Journal* 2008;337:a1023.
- Garattini, L. Gritti, S. De Compadri, P. Casadei, G. (2010) Continuing Medical Education in six European countries: A comparative analysis. *Health Policy, 94 (2010) 246-254, Elsevier*
- Hamsedan University of Medical Sciens with the code IR. UMCHA.REC 1395.129 in 2016
- Iberric C, Jencins T, Carison J. (1998). Using self- directed learning moduls Iranian]NursingMidwiferyRes24291-4122511\_112705
- Marcel H. (2016) The excruciating final hours of President George Washington
- McCarthy M. US campaign tackles drug company influence over doctors. *Lancet* 2007;369:730.
- Morgan JM, Marco J, Stockx L, Zannad F. Educational governance for the regulation of industry sponsored continuing medical education in interventional and device based therapies. *Heart* 2005;91:710–2.
- Moynihan R. Is the relationship between pharma and medical education on the rocks? *British Medical Journal* 2008;337:a925.
- Pisacane A. Rethinking continuing medical education. *British Medical Journal* 2008;337:a973.
- Ratanawongsa N, Thomas PA, Marinopoulos SS, Dorman T, Wilson LM, Ashar BH, et al. The reported validity and reliability of methods for evaluating medical education: a systematic review. *Academy of Medicine* 2008;83:274–83.
- Relman AS. Industry support of medical education. *The Journal of the American Medical Association* 2008;300:1071–3.

RS Official Gazette 102/2015

Scientific conferences (<http://www.konferencii.ru>)

Scientific Electronic Library e LIBRARI.RU (<http://elibrari.ru>)

Shannon S. Needs assessment for CME. *Lancet* 2003;361:974.

Steinbrook R. Commercial support and continuing medical education. *New England Journal of Medicine* 2005;352:534–5.

Steinbrook R. Financial support in continuing medical education. *The Journal of the American Medical Association* 2008;299:1060–2.

Wass V, Richards T, Cantillon P. Monitoring the medical education revolution. *British Medical Journal* 2008;327:1362.

Woollard RF. Continuing medical education in the 21st century. *British Medical Journal* 2008;337:469–70.