ELEARNINGNEWS ARTICLE

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CME Training and Microlearning

Let's find out how microlearning can be applied to continuing medical education (CME).

Continuing medical education is a professional duty for health professionals. It is regulated and coordinated by specific national and international bodies. The format of these courses must balance the complexity of the subject matter with organisational requirements: this may leave room for some microlearning lessons.

CME: continuing medical education

Doctors and health personnel are obliged to continuous training. This is not only for reasons of dedication to the profession: staying up-to-date on new medical publications as well as on procedures and recent discoveries is a deontological obligation that allows one to perform one's duties to the best of one's ability.

It is also the relevant legislation that requires that professional development be carried out periodically. Since 2002, the **National Programme for Continuing Medical Education (CME)** has required that healthcare professionals follow periodic continuing education courses, whose multi-year training objectives and guidelines are formulated by the National Commission for Continuing Education (CNFC). This is flanked by a series of organisations and third parties that take part in the creation and delivery of teaching materials; these providers must be accredited by a public institution such as the CNFC, a Region or an Autonomous Province, according to precise guidelines.

Continuing Medical Education is a national regulation that is part of an international standard, with direct connection to the **European Accreditation Council of Continuing Medical Education (EACCME)**, through the participation of the National Federation of the Orders of Surgeons and Dentists (FNOMCeO). The EACCME is responsible for assessing CME credits, in the proportion of one point for each hour of training attended. This training may take the form of live training events, eLearning material and training activities, or activities valid for continuing professional education.

Provider Accreditation

The **National Manual for the Accreditation of CME Events** defines the minimum and standard requirements for the accreditation of providers as well as the general framework for CME events and specific operational procedures. The requirements, specified in Annex A of the manual, concern:

- The characteristics of the applicant
- The general organisation and resources
- The quality of the training offer and the management of quality improvement
- The absence of conflict of interest

For the overall assessment to be considered positive, all the above requirements must be met according to the criteria and standards indicated. In addition to the identification requirements, such as the name, disclosure of registered and operational offices and evidence of previous experience in education and training, candidate Providers must demonstrate that they possess adequate logistical and organisational structures for the delivery of training content. It should be noted that the IT system is an important part of these facilities: this is also because training can be delivered in eLearning format, according to the Distance Learning (FAD) modality.
In order to assess the quality of the training offer, candidate Providers are required to indicate a training plan that determines objectives, targets and scheduled events. The procedures adopted for designing the didactic material and for their delivery must also be indicated, as well as the criteria for assessing learning and user satisfaction and the procedures for awarding CME credits. The evaluations must be included in an annual report on the training activity carried out.

Candidates have some flexibility as to the training methodology they wish to use. These methodologies may be:

- Residential Events (RES)
- Field Training (FSC)
- Distance Learning (FAD)
- Blended

Residential Events can be all those meetings that take the form of a medical conference, such as symposia, seminars or workshops, while **Field Training** covers all those activities that learners can perform in medical facilities, such as the ward or operating theatre. **Distance Learning** is that which contemplates the greatest flexibility in time and space and makes use of the widest variety of technological resources. It is the kind of training that goes by the name of eLearning and that also in the health professions can make its contribution to fruition and ubiquity. A webinar, an e-book, audio-visual files can be used in a way that is more in keeping with work commitments: it is not necessary to travel to attend some face-to-face course; it is possible - if the course provides for it - to interrupt the session to resume it later; it is possible to compare the information received with other resources in electronic format online or otherwise. The **blended** option provides a mixture of methods, supporting each other.

The gift of synthesis: microlearning

Once it has been established that a course can be delivered in eLearning format, it remains to **be decided what structure it should have**. That is, whether it should be limited to a single lesson that unites lecturer and learners in real time or whether several sessions should be addressed to exhaust the subject matter; whether summary questions should be asked at the end of each lesson or whether a questionnaire at the end of the course covering all the topics covered is sufficient; whether support material should be provided for download or whether lecturers' explanations are sufficient.

These are choices that involve consultation between the Subject Matter Experts (SME), the experts in the subject matter to be taught, the Course Writers (CW), who have sufficient knowledge to prepare the material for the course without being an expert, and the Instructional Designers (ID), the designers in charge of giving the course a suitable structure. The decisions of these individuals are also made according to the **type of eLearning technology adopted**. These choices must also take into account that the attention span of the learners is a precious resource and that, to maximise effectiveness, an eLearning course should not take up more time than necessary: the possibility of conveying information in several formats simultaneously - audio and video; lecturer and slides - allows for that synthesis otherwise difficult to achieve.

The **point is to balance the economy of exposition with the complexity of the subject matter**, a task which, in the health sector, can be more arduous precisely because of the complexity of the topics covered. The advantage is that those who benefit from the courses tend to be professionals with advanced training, able to have at least a general idea of the content they are going to benefit from, which leaves room for possible expository syntheses.

The point is to understand how much information can be synthesised. **In other areas, eLearning courses can be delivered in microlearning mode**. This is a didactic approach that focuses on the transmission of individual skills in order to package small, highly focused content. A lesson in microlearning is completed in a limited time, ideally under ten minutes but can be even shorter than five, covering a single aspect of a topic. The great strength of microlearning lessons is that they can be taken at any time of the day, without necessarily disrupting the sequence of professional commitments. This flexibility is multiplied by the possibility of use via smartphone, a tool for which the course must be optimised at the outset.

By their very nature, **microlearning lessons must have a specific character**. It is therefore possible for several specific notions to be taught in several microlearning lessons: each will address some aspect of a competence to be taught. The closer they are to practical aspects, the more effective they will be. Conversely, theoretical topics and premises for notions or procedures may not fit best into this format.

Microlearning in medicine?

After this introduction to microlearning, the question arises as to whether the healthcare sector lends itself to this kind of format. On the one hand, there is the need to optimise the use of compulsory refresher courses. Among the various professions, not only the health professions, there is a perception that refresher courses, while useful for professionals, do not take into account the realities of work, made up of long hours of overtime and difficulties in planning free time. The pandemic emergency has made the layman realise how exhausting the medical professions can be.

There is also no shortage of scientific studies on the subject. In the paper Microlearning: The **Future of Continuing Professional Development/CME**, the authors question the compatibility of microlearning lessons with the health professions. The study emphasises the positive effects on students' knowledge and confidence in performing procedures, retaining knowledge, studying and engaging in collaborative learning. Among the formats with a positive impact, the study mentions recordings of previous lectures, which would avoid unnecessary travel, and interactive case presentations to sharpen the ability to diagnose and communicate with patients about the purpose of treatments.

Another important aspect that emerges from the studies mentioned is that of the maximum duration. This is not only or not so much for the purpose of maintaining the attention threshold, but rather for the benefits on decision-making capacity: educational units of less than sixty minutes or even in microlearning mode would allow physicians to maintain an active attitude, related to the ability to make diagnoses and prognoses.

In the European context, the European Board for Accreditation of Continuing Education for Health Professionals (EBAC), the accreditation body for residential educational events, such as eLearning courses, envisages courses shorter than sixty minutes. Specific problem-solving oriented lessons, such as information to support clinical decision-making in the individual patient are delivered in microlearning, which EBAC considers a valuable complement to more comprehensive learning formats. For this purpose, EBAC distinguishes between short educational units, lasting less than an hour, and the actual microlearning material, which is more oriented towards decision support.

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