ELEARNINGNEWS ARTICLE

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eLearning and Covid-19: Conclusions on CME

Benefits and challenges of eLearning in medicine during the Covid-19 pandemic.

During the Covid-19 pandemic, there was a remarkable growth in the use of eLearning as a tool to ensure the continuing education of healthcare professionals. What was an emergency response demonstrated the advantages of a new form of organising education.

Distance learning in medicine during the pandemic

Now that the acute phase of the pandemic emergency seems to be over, it is easier to observe what changes the virus has brought about in society. In particular, work organisation and training have had to change their approach, first to ensure continuity during the acute phases of quarantines and during the risk of further stoppages in community life; then, to put contingency plans in place in case this or another health risk returns.

More than any other sector, the health sector was subjected to unprecedented organisational stress. Not only did it have to continue to function, but it also had a duty to do so for the rest of the population. Medical centres, doctors and health personnel were, more than others, subjected to the risk of infection and an unparalleled workload. In this situation, reducing risks that were not strictly necessary was a vital necessity: those activities that could be carried out remotely, such as staff training, could help control the risk of the virus spreading among healthcare personnel.

Continuing Medical Education

Continuing education in healthcare is more than just updating skills. CME is a deontological obligation to provide a useful and effective healthcare service. This obligation is formalised in a National Continuing Medical Education Programme. Established in 2002, this has its regulatory basis in Legislative Decree 502/1992 Legislative Decree 229/1999. The Programme lists the various figures that take part in CME: Medical Centres, Universities and Providers of training courses; complementing and supervising this is the National Commission for Continuing Education, which, among other things, is responsible for standardising the content and awarding training credits to participants.

The National CME Plan is linked to the **European Eaccme standard**, which, together with the US Iacet, defines best practice at international level.

Benefits and challenges of eLearning in medicine during the Covid-19 pandemic

Thus, continuing education is not simply a commitment of the individual practitioner but a formalised need of the entire health sector. This makes it all the more important to assess the extent of eLearning on continuing medical education during the pandemic phases. eLearning brought several advantages such as improved accessibility of training content, guaranteed continuity during the acute phases of quarantines, as well as substantial cost savings.

Regarding accessibility, eLearning made continuing education more accessible for healthcare professionals, allowing them to access online training content anytime and anywhere. The long hours of service, the risks of infection and the unpredictability of emergencies restricted the logistical and organisational choices of professionals and students, who were thus able to optimise their time.

This allowed health professionals to continue their continuing education despite the closure of traditional training facilities. Recent graduates, who were immediately qualified without the need to take the state exam to meet the staffing requirement, had an additional opportunity to integrate training and work schedule.

The ability to take online courses contributed to cost containment, both for individuals and for the healthcare facilities they served: with the elimination of costs associated with travel and accommodation to attend in-person training events, replaced by real-time or delayed video-conferencing lectures. The greatest benefit was to allow healthcare professionals to stay up-to-date on clinical practice and the latest scientific findings, while ensuring the safety and health of participants.

eLeaning to react to Covid-19: results of the Italian project

Fully understanding the characteristics of the virus and disseminating the results on the most effective therapies was the vital priority that allowed the death curve to be reversed. What used to be an inexorable and obscure enemy has turned into a serious but manageable threat. Seen from a distance, medical and pharmacological research has produced exceptional results in a timeframe that, although it seemed interminable, was exceptionally short. In modern times, the Spanish flu epidemic of 1918-1920 produced a death toll in excess of 50 million. By January 2023, Covid had caused just under 7 million deaths in about three years. One hundred years of research and technological advances have made a difference, in addition to the different characteristics of each virus.

The research ' **Rolling e-learning courses on COVID-19: an Italian experience**', reports the results of an e-learning project focusing on the progressively acquired knowledge on Coronavirus Disease 19 (COVID-19), aimed at Italian healthcare professionals. The project was funded by the Federazione Nazionale degli Ordini dei Medici Chirurghi e degli Odontoiatri (FNOMCeO) and the Federazione degli Ordini dei Farmacisti Italiani (FOFI). The research is signed by Fabrizio Pregliasco, researcher at the University of Milan, Maria Rosa Valletto, Pietro Dri and Nicoletta Scarpa, doctors and publicists at Zadig Ltd, Filippo Anelli, President of the Federazione Nazioname Medici e Odontoiatri (Fnomceo), Andrea Mandelli, President of the Federazione degli Ordini dei Farmacisti Italiani (Fofi).

The basic course was launched as soon as the first cases of COVID-19 occurred in Italy. Several courses were published during 2020 to meet the educational needs related to the pandemic and to offer continuously updated content supported by evidence-based scientific information and institutional sources. From 22 February to 31 December 2020, 70,825 health professionals enrolled in the main course and 67,103 (94.7%) passed it, obtaining Continuing Medical Education (CME) credits. The participants represented approximately 19% and 12% of all practising Italian doctors/dentists and pharmacists respectively. Over 99.5% of the participants considered the content to be of high quality, relevant and appropriate for their immediate educational needs.

The Italian e-learning offer developed in the first nine months of the pandemic has achieved wide dissemination and excellent acceptance by healthcare professionals working in the field. This educational model provides healthcare professionals with evidence-based and tailored information.

The results of the programme showed that eLearning improved the accessibility of CME while maintaining the quality of training and reducing costs. However, participants reported some challenges in the use of eLearning, including the lack of social interaction and the need for more personal motivation. The authors recommend that further training should be provided to healthcare professionals on the use of eLearning and that eLearning should continue to be used as an essential continuing education modality even after the end of the COVID-19 pandemic.

The paper highlights the importance of developing new strategies to improve social interaction and participant engagement during online training. There are also some specific recommendations for training providers, including the use of advanced online learning technologies, the creation of customised programmes for participants, and the implementation of measures for continuous evaluation of online training.

Furthermore, the paper represents a significant contribution to the scientific literature on eLearning in medicine, as it provides a detailed overview of current research on the topic and is based on a large sample of participants. The findings and recommendations provided by the paper may also be useful for other areas of education and vocational training that relied on eLearning during the COVID-19 pandemic and want to improve the effectiveness of online training in the future.

Guidelines for upcoming emergencies

The research presents a list of ten key points for the development of eLearning courses in healthcare for professionals during epidemics/pandemics:

- Choose eLearning as an educational tool, to avoid close contacts and transfers
- Be timely and responsive, to provide health professionals with adequate information in a timely manner
- Develop tailor-made short courses for participants, to optimise the healthcare professional's time constraints
- Use eLearning platforms that do not require broadband (especially in countries with scarce resources), to facilitate participation
- Offer the course free of charge, to promote participation
- Provide information on regulatory sources, to standardise professional behaviour
- Refer to evidence-based scientific literature to ensure high quality information and education
- Including a section on risk communication in epidemics/pandemics, to make health professionals competent in responding to people's questions and needs
- Inclusion of institutional websites, to counter misinformation
- Continuously updating educational content, to keep up with developments and the progression of scientific knowledge.

In Conclusion

The use of eLearning in medicine during the COVID-19 pandemic made an important contribution to healthcare professionals. The flexibility, accessibility and cost savings of eLearning have proven to be particularly useful in times of health crisis. The proposed results are in line with student **surveys in some developing countries**.

However, eLearning also presented some challenges, such as the need for a reliable Internet connection and increased personal motivation. Therefore, there may be a need to provide further specific training in the use of eLearning to healthcare professionals.

In the future, eLearning may be an important continuing education tool for healthcare professionals. The integration of artificial intelligence and virtual reality could further enhance the learning experience, while practical training and simulation of complex clinical situations could be used more widely.

In summary, eLearning has proven to be an effective and efficient way to provide continuing medical education during the COVID-19 pandemic and has the potential to be even more useful in future CME.