

Continuing Medical Education (CME) in time of crisis: How medical societies face challenges and adapt to provide unbiased CME

Loredana Simulescu^a, Marieke Meijer^a, David B. Vodusek^b and with the support of the BioMed Alliance CME Experts Permanent Committee representatives.

^aBioMed Alliance, Belgium; ^bBioMed Alliance CME Experts Permanent Committee, Belgium

ABSTRACT

Healthcare professionals need to maintain their knowledge and skills to deliver the best possible care to patients. Medical societies play an important role as providers of continuing medical education (CME) and have actively continued this role during the COVID-19 pandemic adapting the delivery of education to virtual meetings and courses. The Biomedical Alliance in Europe CME Experts Committee conducted two surveys to collect information on the delivery of CME, generally, and during the COVID-19 pandemic from the member medical societies. In this article, we will present the most relevant data collected and share some reflections based on this analysis.

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Introduction

It is essential for healthcare professionals to maintain and update their knowledge and skills to deliver the best possible care to patients. Medical societies play an important role in providing educational programmes and clinical updates to healthcare professionals and researchers by delivering state-of-the-art continuing medical education (CME) through a variety of interventions including large congresses and conferences, in person and online courses, e-learning platforms, examinations, clinical practice guidelines, peer-reviewed journals, and other scientific publications.

The Biomedical Alliance in Europe (BioMed Alliance) is a non-profit organisation representing 36 leading European research and medical societies whose members are actively involved in health care and research from bench to bedside and from clinical practice to bench. The BioMed Alliance was commissioned by its members to create a CME Experts Committee to advocate for independent CME and to identify unmet needs, which contribute to the development of high-quality educational activities.

The Committee aims to promote the value of CME provided by medical societies and works with experts in the field of education and science to explore and assess the current needs in the healthcare system to prepare the health workforce of the future. Through various strategic activities such as events participation, issuing articles, capacity building, stakeholder

engagement, position papers, assessment of the accreditation processes, needs assessments and code of conducts BioMed Alliance has positioned the Committee as a strong body for CME in Europe.

From discussions at committee meetings, we learnt that the medical education provided by medical scientific societies in Europe is highly varied and evolves at different rates in different specialities. It reflects a complex process where many components are taken into consideration to build good educational programmes including peer-review of content, medical experts as speakers, as well as patient involvement, ensuring furthermore that educational content is free of inappropriate industry influence and publicity. The goal of medical societies is to provide healthcare professionals and researchers access to the latest developments in their field and train them to ensure the best patient care and outcomes.

In this context, the committee works towards the creation of a set of standards governing how scientific societies can plan and deliver educational programmes to achieve high-quality CME for the benefit of its members. To produce these standards, there is a need to better understand the existing landscape of CME provided by medical societies and how medical societies evolve and adapt to new challenges and innovations such as artificial intelligence and health crises such as the COVID-19 pandemic.

While the COVID-19 pandemic disrupted the day-to-day activities and business of millions of people in 2020, it has also significantly affected the landscape of CME. Healthcare professionals were working at the frontlines of the COVID-19 pandemic, while others were locked into their homes with no possibilities to meet in person. Medical societies were no longer able to offer CME in the accustomed way – i.e. in face-to-face format or support their members with in-person medical training.

Medical societies had to transform their CME activities, including congresses normally attended by thousands of participants, within short timelines into full online experiences. This transformation not only required a new educational approach, but also had consequences for the medical societies themselves [1].

We conducted two surveys to collect information from medical societies involved in creation and implementation of educational tools. In this article, we will present the data collected and share some reflections based on the analysis of these data.

Methods

Survey on the educational activities of biomed alliance's member societies – Survey I

The survey (Survey I – see Annexe 1) was sent out to the Biomedical Alliance members on 3 July 2019 and was accompanied by background material on key aspects of the survey, including information regarding educational congresses, the accreditation system in Europe and worldwide, and a glossary on frequently used words and phrases. Survey I was structured in six sections: (1) the expectations of societies from the CME Experts Committee; (2) CME ecosystem and stakeholders; (3) development of high-quality medical education; (4) regulation of CME and accreditation; (5) relations with funders, industry and others; and (6) continuing development of volunteers and staff.

Because Survey I was performed in the “pre-Covid situation” we formulated additional questions on the impact of COVID-19 on CME. The Survey II consisted of 27 questions, including demographic questions and questions assessing the current situation in CME (also questions on the involvement of patients in CME provided by societies, which is not reported here). Survey II was sent out in March 2021.

Survey II included three questions assessing the current situation regarding Continuing Medical Education. The first two questions were multiple choice and focussed on how COVID-19 changed the way societies provide education, and the third question

was an open question on the challenges that societies now face in general to provide CME activities. Societies could tick multiple boxes.

Data analysis of Surveys I and II:

Given that most questions were multiple choice, often with the option of selecting more than one response, the total rate of positive responses to each answer option was calculated. On that basis, responses that were selected by 50% or more of respondents were considered significant and are reported in results. However, some individual responses to key questions were considered noteworthy and are provided, too.

Results

A total of 15 responses were received for Survey I from the following societies: European Organisation for Research and Treatment of Cancer (EORTC), European Federation of National Associations of Orthopaedics and Traumatology (EFORT), European Association for the Study of the Liver (EASL), European Association of Nuclear Medicine (EANM), European Society of Endocrinology (ESE), European Association for the Study of Diabetes (EASD), European Academy of Neurology (EAN), European League Against Rheumatism (EULAR), European Haematology Association (EHA), European Society of Cardiology (ESC), United European Gastroenterology (UEG), European Renal Association – European Dialysis and Transplant Association (ERA-EDTA), European Association of Urology (EAU), European Respiratory Society (ERS) (Table 1).

Data from Survey I are presented by section according to the structure of the survey, as outlined in Methods.

Capturing the Ecosystem of CME Provided by Medical Societies

The Table 2 provides responses on the various stakeholders who are part of the CME ecosystem.

How Do Medical Societies Deliver CME?

In 86% of the medical societies, educational activities were led by a committee, in which both the median and mode number of volunteers was 20 per committee or per working group. Educational committees play various roles in annual congresses and conferences, with 36% of medical societies' education committees organising educational events, such as post-graduate courses, within the programme. In 29% of medical societies, the educational committee played no role in their annual

Table 1. Summary of responses to the multiple-choice question, “What is your society expecting from the BioMed Alliance Permanent CME Experts Committee?”.

What is your society expecting from the BioMed Alliance Permanent CME Experts Committee?	
Form a strong common voice for medical education in Europe	93%
Criteria on how to develop high-quality educational activities	71%
Advice on how to assess needs for education	71%
Common agreement on how to talk with pharma/device industry about education	71%
Be represented as one voice at UEMS or CME/CPD level conferences	64%
Advice on how to prepare applications and programmes that are seen as unbiased	57%
Create a platform on communication about different educational activities	50%

(Abbreviations: UEMS, European Union of Medical Specialists; CME/CPD, continuing medical education/ continuing professional development).

Table 2. Summary of survey questions relating to CME stakeholder relationships and key issues relating to CME.

What providers of CME does your organisation collaborate with?	Hospitals/ institutions	79%
	Academia/ universities	79%
What regulators of CME does your organisation collaborate with?	Learned societies	64%
	Accreditation bodies (international and national)	93%
What funders of CME does your organisation engage with?	Industry (pharma/ devices/ diagnostics)	79%
What users/recipients of CME does your organisation cater for?	Healthcare professionals (medical specialists & allied professionals)	86%
What other stakeholders is your organisation engaging with?	Technology companies	86%
	Hospitals/institutions as employers of healthcare professionals	64%
	Professional congress organisers	50%
What do you see as the key issues related to CME?	Assessment of individuals, of educational programmes (bias, quality, impact, change in practice, satisfaction, etc.)	86%
	Resources (funding, human capital, competences, etc.)	64%
	Standards	64%
	Accreditation	57%

(Abbreviations: CME, continuing medical education)

congresses or conferences. The number of permanent staff leading educational activities also differed. Although this figure was difficult to characterise for some medical societies, all societies had permanent staff engaged specifically to develop and organise annual congresses and conferences (mean, 6; range, 1–17). With regard to other educational activities, such as e-learning and in-person courses, a mean of 4 permanent staff members were involved. 57% of medical societies had designated educational experts, whether provided by an external consultant (29%), committee member (14%) or a permanent member of staff (14%).

Table 3. The most frequent types of educational activities organised by medical societies.

Which educational activities are you organising?	
Interactive courses – during congress or in addition to the annual congress	100%
In-person or traditional teaching – during congress	93%
In-person or traditional teaching – in addition to annual congress	93%
Hands-on courses – during congress or in addition to annual congress	93%
Online educational activities	93%
Fellowship programmes or training programmes	86%
CPD programmes	71%
Blended learning programmes	50%

(Abbreviations: CPD, continuing professional development).

Preparing the Healthcare Professionals of Tomorrow

Table 3 lists the most frequent educational activities offered by responders.

Some societies provided further detail regarding their most frequent educational activities, or provided examples of additional activities:

“We are planning a leadership programme. Currently, we do career development sessions at the congress and activities/round tables, especially for junior doctors, where they meet with senior professors”. – EAN

“A mentorship programme, including a mentor and mentee in different countries; research projects; attendance at conferences and courses to improve clinical, research, communication and leadership skills”. – EASD

“A masterclass for [rising] hepatologists, focussing on non-medical skills, public speaking skills, how to set up a lab, how to deal with publishing, etc”. – EASL

“Live surgery”. – EAU

“Gamification activities, social media contests, procedure videos, faculty development and officers’ development programmes”. – ERS

“Academic programmes in collaboration with universities, scientific publications, online textbooks, social media case discussions”. – ESC

Seventy-nine percent of societies were familiar with the Council on European Specialist Medical Assessment [UEMS CESMA). However, of those societies with certification programmes, only 50% of them were recognised by UEMS CESMA, and the certification programmes of 21% of societies had undergone auditing by UEMS CESMA.

Regarding research of CME/CPD, 15% of societies engaged in such activities. Thirty-five percent of societies referred to some theoretical frameworks, such as the [2], framework when developing and assessing educational activities and programmes.

Table 4. How many medical societies apply for MedTech accreditation and EFPIA “green” and how they ensure that the content is unbiased.

Do you apply for MedTech accreditation?	
Option	%
Yes	58%
No	42%
Does it matter for your society that your events obtain EFPIA “green”?	
Option	%
Yes	54%
No	46%
When the educational activities are supported (partially or in full) by the industry, how do you guarantee that the content delivered is unbiased	
Responses to open question	%
Programmes are designed, checked and peer reviewed by independent scientific committee	46%
Industry plays no role in the development of the content	54%

Table 4 presents how many members apply for MedTech accreditation and if it matters for our medical societies that their events obtain EFPIA green. Moreover, it shows how medical societies guarantee that what they delivered is unbiased.

Assessing Needs and Preventing Bias

Table 5 lists how medical societies identified educational needs and minimised bias in educational activities. While these results indicate that medical societies are active in these two areas, it should also be noted that advice on how to assess needs for education was a high priority for most medical societies (71%), and more than half of the medical societies desired advice on how to prepare applications and programmes that are experienced as unbiased.

Table 5. The ways by which medical societies identify educational needs and prevent commercial bias in educational activities.

How do you identify which educational activities your members need/expect?	
Committee develops a curriculum	86%
Questionnaires sent out to members	71%
Consultation with National Societies in my speciality area	71%
Consultation with junior researchers	64%
Consultation with patient organisations	50%
How do you guarantee that your educational activities are as unbiased as possible?	
Conflict of Interest management procedure	100%
Industry events are organised at different time slots than the scientific programme	93%
Industry information is separated from scientific information in the programme/ website, etc.	86%
Internal policy for Conflicts of Interest	64%
Feedback questionnaire post activity – participants are asked to provide feedback on bias of speakers etc.	64%
Activities must be supported by more than one company	64%
Diverse committees, including people from different regions, patient representatives, etc.	57%

Navigating the Regulation of CME and Accreditation

When asked whether their society’s leadership was fully aware and knowledgeable of the current landscape of accreditation in Europe, 79% responded positively. 86% of medical societies submitted live events for accreditation, with 79% of medical societies submitting to UEMS EACCME and 29% to national accreditation authorities. Forty-three percent of medical societies submitted online (asynchronous) activities for accreditation (e.g. portals, platforms, online modules, libraries, mobile apps), with 29% of medical societies submitting to UEMS EACCME and 21% to an independent European Speciality Accreditation Board (ESAB). A similar rationale underpinned the submission of live and virtual events for accreditation, namely: to gain a quality stamp. The quality stamp is a requirement (by sponsors, or for recertification or for CME points), it is preferred by delegates, and it is part of that society’s strategic plan. Rationales for not submitting for accreditation included: expense, unclear rules and lack of requirements.

There was general agreement that an accreditor’s role includes the provision of a quality stamp to demonstrate that a programme is commercially unbiased and of high quality (86%), as well as to check whether educational programmes comply with accreditor rules (79%). Thirty-six percent of medical societies expected accreditors to both help organisations grow as providers of high-quality medical education and to provide guidance on how to develop high quality educational programmes.

Most medical societies submitted educational programmes to UEMS EACCME, with reasons including that this accreditation was a requirement to gain a quality stamp (43%), that accreditation has previously been gained in this way (36%) and that a majority of event participants require accreditation in order to be able to attend the event (36%).

UEMS EACCME represents the main accreditor for most societies, and 57% of respondents reported a medium to relatively high level of satisfaction with this accreditation system. Other accreditors appear to elicit similar or lower satisfaction levels among societies. Sixty-four percent of societies were aware of the EACCME Trusted Provider programme, while only 17% reported that they were identified as Trusted Providers.

17% of societies seek accreditation from a European Speciality Accreditation Board (ESAB) (of whom some cooperate with EACCME). This includes e.g. the European Board for Accreditation in Haematology

(EBAH), recognised by several national societies, or the European Board for Accreditation in Pneumology (EBAP).

Forty-six percent of societies submitted educational programmes to national accreditation authorities, and this was done in addition to EACCME submission in all cases. This generally took place when UEMS EACCME accreditation is not recognised in the country where the event is taking place, or where national accreditation is required.

75% of respondents were familiar with the concept of provider accreditation, which is already implemented on the national level in Europe in some countries, e.g. in Austria and Switzerland, or on the European level by the European Board for Accreditation of Continuing Education for Health Professionals (EBAC). Eighty percent of societies have shown an interest in engaging in a system of provider accreditation.

Mitigating Commercial Bias

Most medical societies sought external funding for events such as congresses (93%) and in-person educational courses (86%). Congress funding comes from mixed sources and may include industry-organised segments such as satellite symposia outside of the scientific programme. Online asynchronous activities were reported as mostly funded by industry (79%) and synchronous activities (e.g. live webinars) less so (64%). Medical societies funded these activities via delegates, educational budgets and, for some societies, the financing for online activities came from mixed sources, including industry.

When asked whether educational activities could be organised without industry support, most societies replied that they could be; responses appeared to depend in part on how the medical societies' revenues were generated elsewhere.

COVID-19 and CME Delivered by Medical Societies

The Survey II included three questions (No 6–8) assessing the current situation regarding Continuing Medical Education. The survey was completed by 17 different BioMed Alliance members. The results are reported in Table 6.

Discussion

The reflections presented in this article are part of an integrated effort by the Biomed Alliance CME Experts Committee to have a better picture of the medical

education landscape in Europe and to raise awareness of the role that medical societies play in being unbiased “educators” of healthcare professionals.

It takes a lot of effort from medical societies to produce high-level CME. They involve medical experts and education professionals to design and vet the CME activities. They put in place extensive mechanisms to ensure alignment with codes of conduct and international and national laws to mitigate commercial interests. Also, they invest time and resources to develop CME tools in areas which are too niche to be covered by others and where there is a request for educational offers to respond directly to patients' needs. Finally, they need to navigate the certification processes and engage with various stakeholders involved in the fields of health and education.

CME provision largely occurs on clinical and academic grounds with healthcare professionals making up the bulk of CME recipients. Healthcare professionals contribute financially to their lifelong learning by means of individual registration or membership fees as well as by investing time. The healthcare industry also supports educational activities via educational grants; their involvement is highly regulated by codes of conduct and by European and national laws.

The BioMed Alliance members have no commercial interests; their not-for-profit nature along with the checks and balances systems and governance models make them particularly suited to designing and delivering unbiased CME. The BioMed Alliance members are bound by the BioMed Alliance Code of Conduct (<https://www.biomedeurope.org/about/code-of-conduct.html>) which also addresses CME and continuous professional development. In short, to mitigate bias in industry-funded educational activities, the BioMed Alliance members do not allow industry to be involved in the development of the scientific programme and set up guidelines to regulate the relationship between the society and the industry (European Society for Cardiology Board 2012). Data from Australia also indicate a high level of interaction between the pharmaceutical industry and medical organisations; while most organisations had policies for guiding their relationship with industry, it seemed unclear to authors whether these were effective in preventing conflicts of interest and maintaining public trust [3]. Our survey was not conceived to analyse the actual situation in Europe. The impression gained from answers to questions 84–93 of the Survey I is that European medical societies are – while mostly relying on some support from the industry – very careful in keeping autonomy in designing CME.

As highlighted in a previous BioMed Alliance article, medical societies are best positioned to provide best

Table 6. Responses to questions 6, 7 and 8 from Survey II.

6. How has the COVID-19 situation changed the way you provide education?	
We only organised virtual events	88%
We organised a combination of face-to-face and live events and/or hybrid events	12%
We only organised face-to-face activities	6%
7. Are you planning face-to-face CME-CPD activities in 2021?	
All our activities will take place online	41%
At the moment, we have planned both virtual and face-to-face activities	35%
We are organising hybrid events and online events	35%
8. What are the three main challenges* your organisation is currently facing in delivering Continuing Medical Education/ Continuing Professional Development programmes?	
Challenges	Percentage
Ensuring interaction with participants & facilitating networking online	47.1%
Transition from face-to-face to digital	35.3%
Finances: e.g. higher costs, lower revenue, limited resources & budget planning	35.3%
Issues around CME accreditation for virtual CME	23.5%
Struggle to teach certain topics virtually, that are best taught in face-to-face setting	23.5%
Availability experts/faculty	17.6%
Competition from high number of other digital events	17.6%
Short timelines	17.6%
Limited digital skills (of participants, faculty or both)	11.8%
Finding most appropriate hybrid format, with right mix of digital/face to face	11.8%
Increase in attendance	5.9%
Respecting diversity policy	5.9%
Uncertainty delegate behaviour	5.9%
Ensuring educational goals are reached	5.9%

*All responses were taken into account and are provided in the sequence of frequency of a particular response

practices. Sharing best practices frequently requires an understanding of areas of practice devoid of commercial interest, not least avoiding unnecessary investigations or treatments; formulating best practices needs an independent and balanced educational perspective [4].

One of the aims of our inquiry was to gain a better understanding of societies' practices in terms of submitting their programmes for accreditation at the national and international level, as well as the drivers for accreditation submission. Unanimously, respondents favoured some form of accreditation. Medical societies expressed an interest in learning more about provider accreditation, regarding its pros and cons and its feasibility in the European setting. To this end, engagement with European organisations offering provider accreditation may be beneficial.

The pandemic highlighted the importance to have consolidated medical societies ready to step up, help healthcare professionals, decision makers and patients with independent expertise, clinical guidelines, and research [5].

While medical societies "survived the COVID-19 pandemic" and found innovative ways to organise

CME activities, challenges remain. Practical issues around resources, uncertainty, accreditation, short timelines, and a lack of digital skills complicate the organisation of the activities of scientific societies. At the same time, it has been more difficult to find faculty and experts to deliver content, particularly as they were often deeply engaged in the response to the COVID-19 pandemic. Societies also indicated that competition and the large number of online events organised by other organisations make it more challenging to reach as many health care professionals (HPCs) as possible. One of the major tasks each society faces is facilitating interaction, networking, and engagement in an online environment, as this is central to the CME experience, and difficult to accommodate without face-to-face contact. In the medical field it is also more difficult to provide certain forms of training online, where face-to-face interaction is key to specific situations that require a hands-on education style. There are also concerns about accreditation, and the specific conditions for the accreditation of different types of online sessions including live sessions, recorded sessions, and e-learning.

At the same time, online education has increased the audience of online CME activities compared to the face-to-face events, as participation became more flexible, and participants could join activities from their own countries and others in the same time zone. Cost and time barriers were lowered and access to education for a larger number of members was facilitated.

In the near future, it seems likely that medical societies will continue to organise online or hybrid events, or at least maintain the option to quickly transform face-to-face events into online events if necessary. More and more medical societies are exploring the opportunity of organising hybrid events once restrictions allow the organisation of events with a face-to-face part. The COVID-19 pandemic will have a lasting impact on the CME landscape and those digital elements will continue to play a major role in CME over the coming years.

Conclusion

The BioMed Alliance members are committed to adapting their educational activities to contemporary needs and challenges. They collaborate and work together to set up ethical standards and good practices, they engage with actors from the educational field, with stakeholders from the healthcare environment and with lawmakers to set up standards for unbiased and high-level CME. They invest time and resources to ensure compliance with national and European laws

and to navigate through accreditation systems. And finally, they attract and support networks of high-level experts in the field of medicine to keep healthcare professionals up to date. Informed doctors with independent and unbiased medical knowledge will be able to provide the best standard of care to their patients.

The role of medical societies has been crucial during the COVID-19 crisis and will remain vital beyond this time. They have pushed themselves to the limits, demonstrating a willingness to adapt and innovate as they organised ambitious virtual congresses in record time. These educational tools have been essentials for healthcare professionals all around Europe, but have also reached a global audience in times, when we have been confronted with a new virus and healthcare challenges, for which no guidelines existed.

BioMed Alliance members have been key players in this endeavour to maintain and develop the outstanding quality of European health services. They have trained doctors and nurses to deal with COVID-19 patients and they have been on the frontline to develop the best diagnostic solutions to fight the COVID-19 outbreak.

With this work, the BioMed Alliance CME Expert Committee has sought to better understand the CME ecosystem in Europe and to assess the challenges and the opportunities that medical societies face in a world where medical innovation is accelerating in the face of challenges due to Covid 19.

Better education will result in better care. Therefore, it is vital that medical societies can continue this important mission and that education for doctors remains impartial and based on the most relevant and reliable scientific information.

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Working Group responsible for the BioMed Alliance's surveys

Céline Carrera (ESC), Anja Sander (EAN), Marieke Meijer (BioMed Alliance), Carine Pannetier (ERS), Eleanor

Kennedy (EASD), Fabiola de Andrade (EHA), Line Joubert (ESC), Mounia Heddad Masson (EASL), Michel Ballieu (BioMed Alliance); Anne-Claire Cazottes (BioMed Alliance).

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