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# The medical profession, industry and continuing medical education

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The Medical Profession, Industry and Continuing Medical Education: Finding the Balance That's Right for Patients

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# The Medical Profession, Industry and Continuing Medical Education: Finding the Balance That's Right for Patients

Running head: Future of Medical Education

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**Key words:** Continuing medical education, healthcare industry, medical professional societies, financial support, conflict of interest

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#### This article has been endorsed by:

- The Board of Directors of the Biomedical Alliance in Europe
- The Future of CME Task Force composed of the following Biomedical Alliance member societies:

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#### **Abstract**

Provision and participation in formal external continuing medical education (CME) is costly. Employer or state support of CME is the exception rather than the rule. The medical industry has supported both providers and consumers of educational activities, leading to concerns of commercial bias. Recent medical industry initiatives in Europe to improve the transparency of the relationship between industry and the profession, including the field of medical education, have had the paradoxical effect of the industry playing an increasingly direct role in the provision of physician education. Funding of medical professional society annual congresses has been directly and indirectly jeopardised. Acknowledging that there are areas of co-operation in the field of education between the medical profession and the medical industry from which both can benefit, we argue that medical education requires an objective approach that the primary fiduciary duty of medical industry companies precludes. Medical professional societies, as not-for-profit organisations whose core mission is the development and promotion of best practice, are best placed to guide and deliver medical education to their members.

#### **Key words**

Continuing medical education, healthcare industry, medical professional societies, financial support, conflict of interest

#### Introduction

Everyone in society has an interest in physicians and other healthcare professionals performing well – training doctors is costly and often subsidized by public funds, healthcare consumes a large portion of national finances, and at some time or other, most members of society will become a patient. The pace of scientific progress places a particular onus on medical professionals to adapt continuously to novel and better approaches to manage their patients. Best practice guidelines are helpful but there are important gaps between these recommendations and what is delivered in clinical practice. Maintaining knowledge and skills requires continuous and unbiased medical education for physicians and other health care professionals, and continuing medical education (CME) has become an essential component of efforts to ensure high quality practice.

The greater part of a doctor's development as a physician occurs after qualification; but in contrast to the well-defined and regulated process of undergraduate medical training and the ensuing specialist training, CME is variable in form and scale in Europe and around the world (1). Increasingly, state licencing systems have adopted models of formal continuing professional development (CPD) of which CME is a key part. Regulation varies from no monitoring system of CPD, to an honour-based commitment to engage in a prespecified minimum amount of CME, to registration of a range of CPD activities, to formal examination and periodic re-certification. National and international CME accreditation authorities have drawn up criteria to ensure high quality CME (2, 3, 4, 5). In an effort to avoid commercial bias in events and programmes that receive financial support from the industry, the European Accreditation Council for Continuing Medical Education (EACCME) requires that 'all funding from sponsors must be provided as an unrestricted educational grant, free of any attempt to influence the programme, individual sessions, subjects for discussion, content or choice of faculty members' (2).

The medical industry has played a prominent supportive role in medical education in recent decades. This support raised ethical concerns related to both industry and healthcare providers. Much has been done to ensure a balanced and unbiased presentation of data, and a robust separation of educational and marketing interests. However, there are indications that the industry intends to play a more direct role in educating healthcare professionals, and in the process, to withdraw or reduce unrestricted financial support of medical professional organisations with whom they have previously partnered. This paper puts forward the position of the Biomedical Alliance in Europe (the

BioMed Alliance), an umbrella organisation representing the views of twenty seven medical organisations and more than 400,000 healthcare professionals and researchers in Europe. We describe the current roles and responsibilities of the medical professional societies and the medical industry in medical education and the development of the Industry adopting a more direct role in CME. We argue in favour of measures that guarantee an ethical and transparent relationship between medical professional societies and the medical industry in the field of medical education that promote the best outcomes for patients through unbiased, high quality CME.

#### **Role of Professional Medical Societies**

Doctors seek knowledge in a wide variety of ways. Medical journals, medical websites or other digital resources (social networks, dedicated blogs) and, to a lesser extent, textbooks are used for self-learning. Learning in practice, small group educational meetings, multidisciplinary discussions (both formal and informal) and interactive workshops in particular have been shown to be effective (6,7). Large meetings including national and international symposia and specialty congresses remain the most popular form of external CME for European physicians (8). In this context, medical professional societies play a central role in the provision of CME, based on best available evidence, at national and international level. Their digital learning portfolios are available for continuous self-directed and blended learning. Their congresses are designed to educate professionals by highlighting the key messages of international or national clinical practice guidelines and their application in daily clinical work, the outcomes of the latest research, and increasingly by way of dedicated educational programmes integrated into medical congresses. They offer a unique opportunity for face to face educational engagement with their peers and with experts. Best practice frequently requires an understanding of areas of practice devoid of commercial interest, not least avoiding unnecessary investigations or treatments, and requires an independent and balanced educational perspective. The notfor-profit nature of medical professional societies, their constitution, systems of governance and essentially altruistic goals make them particularly suited to designing and delivering unbiased medical education.

#### **Role of Medical Industry**

The medical industry plays a key role in the development of novel technologies, devices and medications, in close collaboration with clinical scientists and physicians. There is a regulatory requirement for the industry to ensure safe use of its pharmaceutical products (9) and devices (10). These requirements mandate a certain level of training in the safe and effective use of products. Procedural training in the use of complex devices is frequently device specific and focused on correct application and handling. Product training has different goals and requirements than medical education which provides an unbiased overview of available approaches. Through the process of research and development of new pharmacological and technical approaches to disease, the industry has built up a deep and wide knowledge base of educational value. The most widely applied, and generally accepted, model of industry involvement in medical education is provision of unrestricted educational grants to CME providers, on the express understanding that all reasonable measures are taken to avoid biased educational messages. Less clearly unbiased educational meetings or online programmes that offer an opportunity to showcase products are funded and designed by industry through intermediary Medical Education and Communication Companies (MECCs). The industry plays an even more direct role in medical education and training through training institutes, educational foundations, 'Excellence Programmes', and, in some parts of the world, is the sole provider of CME. The larger industry companies have workforces numbering into the tens of thousands, and have developed sophisticated educational programmes for their employees, expertise some companies are keen to utilise to educate doctors (11,12).

#### **Greater Industry Engagement in Education and its Impact**

Some commentators view any industry involvement in medical education of physicians as unacceptable (13), while others take a more nuanced and pragmatic view (14, 15). Concerns relating to the introduction of bias in physician education and wider concerns regarding the interaction of industry and medical professionals has led to regulation. This includes the Sunshine Act in the United States and 'soft legislation' produced by the European Commission in 2012 when the 'List of Guiding Principles Promoting Good Governance in the Pharmaceutical Sector' was published by the Platform on Ethics & Transparency (16). Soon after, the representative organisation for the pharmaceutical industry in Europe, EFPIA (The European Federation of Pharmaceutical Industries and Associations), and its medical device equivalent, MedTech Europe, produced guiding Codes of Conduct for their members (17,18) outlining appropriate interaction with

physicians, including the nature and support for educational meetings. Our organisation, the BioMed Alliance, produced a Code of Conduct outlining the ethical basis for the interaction of medical professionals and industry (19) (Table 1).

The MedTech code prohibits direct sponsorship of individual healthcare professionals to attend meetings organised by Professional Medical Societies, but allows support of third parties to organise meetings, including medical professional societies and MECCs. The EFPIA code (17) allows support for physicians to attend third party meetings, details of which are published (with the individual's agreement) on an open access national register on the national pharmaceutical organisation's website.

Whereas the anticipated effect of the industry codes was to promote a more transparent and ethically sound interaction between industry and medical professionals, the actual outcome, at least in the field of education, has been contradictory. Some industry companies increasingly adopt a direct role in designing "educational programmes" on their own, without adequate governance to protect such programmes against bias relating to their own products (10).

The industry's fiduciary duty is to its shareholders and owners, a position that introduces inevitable bias in matters relating to information about its products. The narrow focus of drug or device specific training often lack context, and is less likely to promote a balanced approach to patient management. The converse is also true – patent-free and non-pharmacological treatment, and management strategies that have no inherent commercial value, including those that reveal waste or redundancy in current therapeutic approaches, are unlikely to be of interest from an industry perspective, but can be central to promotion of high value patient care.

The ubiquity of bias is put forward as a reason as to why the industry should not be excluded from a more active engagement in medical education (11). Like other stake holders, clinicians, academics, scientists and the organisations to whom they belong certainly have conflicts of interest that can introduce bias into educational programmes. Be they scientific, financial, professional or otherwise, governance systems set out to manage conflict of interest by recognition, declaration and, when it is judged likely they will introduce harmful bias, recusal or exclusion from the relevant activity. Importantly, the fiduciary duty of physicians is towards their patients, not towards shareholders. An argument of moral equivalence of educational bias faced by industry and medical professional societies is misleading.

#### **Proposals for the Future of Continuing Medical Education**

Development and delivery of CME by medical professional societies is an expensive undertaking. It is made possible by the input of volunteer professional members as developers, guideline writers, organisers, and faculty; by membership fees; and, to a significant degree, industry financial support. A small proportion of the funding of CME comes from statutory bodies, tax relief or healthcare and academic institutions. Recent developments of diminishing financial sponsorship and a growing move to greater direct involvement of the Industry threatens the role and viability of medical professional societies in provision of balanced, high quality medical education. It can be anticipated the consequences will be felt unequally; physicians in low and middle income countries affected to a greater extent. Civil society is served by medical professional societies in their role fostering and generating independent science, education and training. Policymakers should be aware that measures that erode these activities risk negative consequences for unbiased patient centred clinical decision making and patient safety.

Medical professional societies are best placed to provide independent, unbiased and effective CME. Accreditation authorities have recently reiterated the requirements for high quality CME that must be followed for educational events and programmes to be accredited and for which CME credits may be granted (20). The concerns of external observers, of healthcare professionals and industry relating to inappropriate interactions have led to Codes of Conduct that were meant to pave the way towards a mutually respectful, transparent and ethical relationship between the profession and the industry. A frank discussion between the profession, the industry, payors, the public, and regulators is needed to determine the best environment for unbiased CME. Health care providers and payors, including state and private hospital owners and health insurers, also have a role to play in the funding of CME. The industry has constructively highlighted the importance of contemporary, needs based, outcome oriented, educational approaches (11). For its part, the medical profession should commit to these principles and ongoing innovation in medical education. Although the industry has an overriding commercial responsibility to its shareholders, it also has an ethical responsibility to see its products used safely, effectively and appropriately for the benefit of patients and society. We argue this is better achieved by support of medical professional societies in their role as educators, rather than itself taking on those activities.

#### References:

- 1. Study concerning the review and mapping of continuous professional development and lifelong learning for health professionals in the EU: Final Report. EAHC/2013/Health/07
- 2. UEMS-EACCME. EACCME criteria for the accreditation of live education events (available for download at <a href="https://www.uems.eu">www.uems.eu</a>) (accessed 30-12-2018)
- 3. Royal College of Physicians of Ireland. Industry Sponsorship and Support. 2012. (available for download at <a href="https://www.rcpi.ie">www.rcpi.ie</a>) (accessed 30-12-2018)
- 4. Royal College of Physicians of Ireland. Guide to Approval of Events for Continuing Professional Development (CPD). (available for download at <a href="https://www.rcpi.ie">www.rcpi.ie</a>) (accessed 30-12-2018)
- 5. Royal College of Physicians. Provide a CPD event. (available for download at <a href="https://www.rcplondon.ac.uk">www.rcplondon.ac.uk</a>) (accessed 30-12-2018)
- 6. O'Brien T, Freemantle N, Oxman AD, Wolf F, Davis DA, Herrin J. Continuing education meetings and workshops: effects on professional practice and health care outcomes (Review). Cochrane Library 2005
- 7. "Understanding Medical Education: Evidence, Theory and Practice" 2nd edition Tim Swanwick
- 8. Quekett, J for M3 Global Research. Helping European cardiologists keep up to date. PMLiVE 22<sup>nd</sup> June 2015 (online access)
- Regulation (EU) 2017/745 of the European Parliament and of the council of 5 April 2017 on medical devices, amending Directive 2001/83/EC, Regulation (EC) No 178/2002 and Regulation (EC) No 1223/2009 and repealing Council Directives 90/385/EEC and 93/42/EEC (http://eur-lex.europa.eu/legal
  - content/EN/TXT/PDF/?uri=CELEX:32017R0745&from=EN) (accessed 30-12-2018)
- 11. Allen T, Doodle N, Hofstadter-Thalmann E, Keijser S, May v, Murama JJ, Kellner T. Framework for industry engagement and quality principles for industry provided medical education in Europe. Journal of European CME 2017; 6(1):1-8
- 12. Medtronic announces new, outcome-based learning program. Feb 13, 2017 04:00 CT on-line press release from Medtronic
- 13. Spithoff S. Industry involvement in continuing medical education: Time to say no. Can Fam Physician 2014;60:694-696
- 14. DeMaria A. Continuing Education, Industry, and Physicians. J Am Coll Cardiol 2008;12:1035-1036
- 15. ESC Board. Relations between Professional Medical Associations and the health-care industry, concerning scientific communication and continuing medical education: a Policy Statement from the European Society of Cardiology. Eur Heart J 2012;33:666–674
- 16. https://web-beta.archive.org/web/20130612031413/http://ec.europa.eu/enterprise/sectors/healthcare/files/docs/outcomes et en.pdf (accessed 30-12-2018)
- 17. EFPIA Board. EFPIA code on the promotion of prescription-only medicines to, and interactions with, healthcare professionals. Consolidated version 2013 (available for download at www.efpia.eu) (accessed 30-12-2018)

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- 18. Medtech Europe. Code of ethical business practice (available for download at <a href="https://www.medtecheurope.org">www.medtecheurope.org</a>) (accessed 30-12-2018)
- 19. Biomed Alliance. Code for transparency in the relationship between the pharmaceutical industry and health care professionals. (Available for download at <a href="https://www.biomedeurope.org">www.biomedeurope.org</a>) (accessed 30-12-2018)
- 20. International academy of CPD accreditation. Consensus Statement for Independence and Funding of Continuing Medical Education (CME)/Continuing Professional Development (CPD).
  - https://academy4cpdaccreditation.files.wordpress.com/2018/01/consensusstatement-for-independence-and-funding-of-cme\_cpd\_final.pdf (accessed 30-12-2018)

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#### Clinical significance

This will be submitted off-line as discussed with the editor in chief. Dr Alpert.

- Maintaining knowledge and skills requires continuous and unbiased medical education
- Accreditation systems have been devised to avoid bias in cases of industry support of continuing medical education (CME)
- Medical professional societies are central to provision of unbiased CME at international level
- The collaboration between the medical professional societies and the medical industry in the field of education involves inevitable challenges as well as important opportunities
- The future lies in agreeing roles and responsibilities and a controlled and transparent cooperation between the medical profession and industry

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#### Table 1

Key legislation and non-governmental organisation codes of conduct relating to ethics and transparency in the relationship between health professionals and medical industry

- Sunshine Act, part of Patient Protection and Affordable Care Act, enacted in the United States 2010
- 'List of Guiding Principles Promoting Good Governance in the Pharmaceutical Sector' published by the European Union Platform on Ethics & Transparency (16) 2012
- Biomedical Alliance in Europe Code of Conduct (19) published 2016
- European Federation of Pharmaceutical Industries and Associations (EFPIA) Disclosure Code (17) activated mid 2016
- MedTech Europe Code of Ethics Business Practice (18) became binding for its Corporate Members from the start of 2017