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CME: Is it Meeting the Mark?

Continuing medical education (CME) is widespread in many countries, including the United States. CME "consists of educational activities which serve to maintain, develop, or increase the knowledge, skills, and professional performance and relationships that a physician uses to provide services for patients, the public, or the profession."[1] The rapid advancement of research and technology in today's world that influences clinical practice increases the need for effective CME programs.[2] This commentary will consider the effectiveness of CME, focusing on its structure and funding sources.

IS CME EFFECTIVE? — STRUCTURE OF PROGRAM

The format of CME has been shown to influence its effectiveness in delivering content to physicians. CME can take multiple forms: from the conventional, passive lecture format to more interactive sessions. A study involving a survey of academic CME leaders in the United States and Canada reported that lectures were still the most widely adopted platform for delivering content in CME programs. However, didactic CME interventions have not shown success in impacting physician behavior or patient outcomes, although they can influence knowledge, skills, and attitudes.[3] These ineffective CME structures continue to be adopted, potentially due to the barriers to adopt active learning techniques that are more likely to be effective. These include the increased effort in preparing and organizing interactive sessions compared with didactic lectures.[4] In addition, physicians themselves prefer to engage in traditional lecture CME sessions than more interactive ones. One proposed reason for this misalignment in the popularity and the effectiveness of the course structure is that interactive sessions can make physicians feel more uncomfortable with greater opportunities to "stand out."[5]

The effectiveness of interactive CME is difficult to conclusively determine. Although the evidence on increased support for interactive over traditional CME is clear from multiple systematic reviews and evidence on active learning strategies, the effectiveness of interactive CME on the more salient endpoints of physician behavior and patient outcomes, especially, is unclear.[5-7] Systematic reviews present differing conclusions on the impact of interactive CME due to differences in their definition of CME interventions.[7] For instance, a Cochrane systematic review had a restrictive definition of CME that only included courses, conferences, lectures, workshops, seminars, and symposia, while another review included educational outreach, auditing, group discussions, and online platforms.[8,9]

In the Cochrane analysis, among 215 studies examined, 6 sought to ascertain if CME activities were associated with differences in provider behavior, prescribing, or demeanor.[8]

IS CME EFFECTIVE? — MARKETING AND BIAS

The industry-derived funding sources of CME question their validity and objectivity. According to the Accreditation Council for Continuing Medical Education (ACCME) 2020 report, 10% of CME courses are currently funded by drug and device manufacturers, which have the incentive to promote products and practices that increase their company's profits rather than those that are the best for patients.[10]

Firstly, the involvement of industries can cause market creation. In Medicine, this is termed as "condition branding."[11] With intensive marketing strategies, companies can frame conditions as diseases. For instance, CME (with the financial support from companies) has been used as a tool to frame aging as a disease to increase the need for hormone formulations.[12] Excessive marketing becomes more problematic where it can promote products that are yet to be approved by regulators. Examples include gabapentin, an anti-epilepsy drug that was promoted to be repurposed for migraines and other disorders.[13] Marketing strategies can also include more subtle methods of funding influencers.

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Although influencers may not publicly advertise a product, they can contribute to "condition branding."[14]

Secondly, the involvement of profit-driven companies can cause the downplaying or complete neglect of harms of products. This is best seen in the case of opioids. Opioid manufacturers have used CME as a tool in promoting use of fentanyl products for conditions such as migraines, and injuries.[15] Individuals exposed to content from industry-funded CME materials were shown to neglect the possibility of addiction or other side effects of opioid use, which was recognized by those exposed to non-industry-funded CME materials.[15] Other examples where industry-funded CME has falsely minimized the harms and focused on the benefits include binge-eating disorder, menopausal hormone therapy, and testosterone therapy.[16]

Despite the active role of ACCME in regulating the role of industry in CME courses, some experts argue that these regulators aid in the masking of industry involvement in CME.[14] Although the ACCME reports that industry-backed CME makes a small proportion of the total today, this could be an underreporting, with ACCME's move to stop counting "equipment, supplies, and facilities" among other resources as commercial support. Despite the seeming decrease in industry-funded CME programs over the years, their subtle involvement is only anticipated to increase in the future, with medical centers and hospitals aiming to stop funding CME for surgeons in 2022. This is reinforced with the preference of surgical residents for free CME opportunities that are more likely with commercial company-backed opportunities.[17]

CONCLUSION

The effectiveness of CME depends on its structure. While the evidence that CME impacts short-term knowledge assessments is strong; the evidence it changes provider behavior, specifically with the goal of improving patient safety and outcomes, is weak. With the increased importance of CME, it is essential to explore strategies to organize effective programs that have reduced, or no, bias from industries.[18] In organizing effective CME programs, the role of online platforms, which have grown in popularity since the COVID-19 pandemic, should be considered. In achieving reduced or no bias from companies, it can be important to develop methods to identify subtle biases with the existence of 3 instruments to evaluate explicit bias in CME programs.[19-21]

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