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Contemporary Issues

The Uncertain Future of Continuing Medical Education: Commercialism and Shifts in Funding

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Abstract

To preserve a professionally responsible system for continuing medical education (CME), medicine must recognize and address two powerful economic forces: commercial interests and societal resource limitations. Commercial support to accredited CME providers is now more than 50% of total CME income. The cumulative influence is increasingly biasing CME development, presentation, and participation toward topics that benefit commercial interests. Options to address this cumulative bias are proposed. Limitations on societal resources for health care have reduced funding from medical schools and hospitals for the infrastructure of CME. Financial pressures are likely to increase, potentially leading to controls on drug costs and significant reductions in commercial support of CME. Financial pressures on physicians' incomes may limit the extent to which registration fees could offset these reductions. Physicians and their professional organizations should recognize these threats to the objectivity, funding, and infrastructure of the CME system and they should work to ensure a viable CME system in the future.

Key Words: Commercialism, continuing medical education (CME), financing, professionalism

Medical leaders, research reports, and journalists have expressed concern about increases in the commercial funding of continuing medical education (CME) and a negative influence of commercial funding on the integrity of CME activities.

1-3 The cumulative effect appears to shift CME toward a commercial exchange that benefits funders rather than a professional service addressing all the needs of patients. However, these discussions have overlooked another important funding shift: reduced support from health care institutions. Medical schools have decreased institutional support for CME.
Anecdotal reports are that hospitals similarly have cut costs by lowering

institutional budgets for CME. Under the financial pressures of managed care, physicians are spending more time providing clinical care with less subsidized time for teaching and other professional activities. Substantially increased commercial funding has masked decreased direct and indirect funding from these traditional sources. The combined effects of these two funding shifts are substantially altering the CME "system" in the United States.

This article provides an overview of a complex set of factors that brought about the current state of CME funding in the United States. It explains the increasingly precarious financial status of the CME system, which could collapse under likely future changes in national health care funding. Steps are recommended to address cumulative commercial influence and funding uncertainty.

Professionalism and Commercialism

Concerns about commercial influence on CME arise from differences between professionalism and

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Reprint requests: R. Van Harrison, PhD, Department of Medical Education, University of Michigan, G-1105 Towsley Center, Ann Arbor, MI 48109-0201. commercialism. Transactions involving goods and services are ordinarily based on "commercial" norms, with buyers and sellers acting on their own behalf and in their own interest. They are generally assumed to hold equal power in the transaction. Sellers have limited responsibility for the welfare of buyers. Buyers are responsible for their decisions, reflected in the general expectation "let the buyer beware."

In contrast, physicians have expertise that patients do not have. Physicians are expected to use that expertise to further the best interests of patients over their own interests. The "professional" norms for physicians reflect a partially formalized social contract between physicians and our society.6 Physicians accept certain obligations, for which society grants physicians certain privileges.7 Obligations include responsibility for medical knowledge and its integrity, application, expansion, and transmission. Obligations for physicians' actions include morality, altruism, accountability, and self-regulation within the profession.^{8,9} In exchange, society grants physicians a monopoly over the use of medical knowledge, considerable autonomy in using it, prestige, and financial rewards.9

CME is part of the professional obligation to transmit knowledge. Differences between commercialism and professionalism in transmitting knowledge are exemplified by the continuing education programs for business and for medicine at the University of Michigan and at many others. The School of Business follows commercial norms in providing continuing business education. Registration fees are typically \$1,000 per day, the School's faculty are paid commercial consulting rates for their time to teach (typically \$2,000 per day), and the School's programs annually make a 20% net surplus on courses. In contrast, the Medical School follows professional norms. Registration fees for courses without commercial support are typically \$180 per day, the School's faculty are not paid for extra teaching, and the School's programs annually make a 2% net surplus. Continuing business education is a product offered on a commercial fee-for-service basis. CME is a professional service to colleagues, with physician planners and teachers usually receiving either no additional compensation or token recognition through honoraria substantially below the commercial value of their time.

CME System in the United States

The American Medical Association (AMA) defines CME as consisting of "educational activities that serve to maintain, develop, or increase the knowledge, skills, and professional performance and relationships a physician uses to provide services for patients, the public, or the profession."10 The core function of CME activities is knowledge diffusion, providing new knowledge to physicians, particularly about new methods of diagnosis and treatment. Knowledge diffusion is a necessary step in the complex processes that result in the application of that knowledge in practice. 11,12 CME activities typically synthesize and prioritize information that is not yet in medical textbooks. Important medical knowledge is produced at a rapid pace, with substantially new CME content offered each year.

CME in the United States operates with limited central oversight or involvement. A decentralized system for CME was built on the decentralized system for health care. The Accreditation Council for Continuing Medical Education (ACCME) established national standards for basic planning and administration, and the AMA defined a credit system leading to physician recognition awards for participating in CME. These organizations perform important functions, but their resources and activities are limited. For example, ACCME's annual budget in 2001 was approximately \$2.5 million, about half of the CME budget at my medical school. The AMA annually provides physician CME recognition awards to only 17,000 physicians.

Approximately 2,500 organizations are accredited to provide CME. Of these, 700 are nationally accredited to provide CME to physicians from multiple states and 1,800 are locally accredited to

provide CME to physicians within their state. Historically, a combination of professional obligation and practical convenience resulted in organizations such as hospitals, medical societies, and medical schools becoming CME providers. No standard basis for funding CME evolved. Across all of these settings, clinical revenues from hospitals, academic health centers, and physicians' practices historically underwrote much of the cost of CME development and presentation. For example, more than 60% of medical schools never pay their faculty when they teach in the school's CME activities, and most pay their faculty's salary when the faculty are away teaching as guest faculty in the CME activities of other CME providers.

No national curricular recommendations have been promulgated for CME. This is in marked contrast to undergraduate and graduate medical education, for which accrediting bodies specify core curricular content. CME providers are expected to assess the needs of their respective audiences and then offer CME activities to address those needs. Individual physicians are to consider their individual learning needs and choose CME activities likely to meet those needs. The success of a CME activity is largely demonstrated by physicians choosing to participate in it.

A commercial company whose sales depend on physicians' decisions may try directly or indirectly to influence CME content to favor the company's product. The ACCME, AMA, and other organizations try to limit inappropriate commercial influence on CME providers, speakers, and participants. In 1990, the AMA established professional guidelines concerning gifts to physicians from industry.13 In 1992, the ACCME substantially expanded its Standards for Commercial Support of CME.14 Recently, the ACCME has determined that those standards are inadequate to address the extent of current commercial influence on CME. ACCME is now revising its standards to prevent individuals with conflicts of interest from developing or presenting CME activities, and it has published a draft of updated standards for comment.15 However, the framework for ACCME's guidelines and standards was conceived at a time when commercial funding was a modest source of CME revenue, and the focus continues to be on minimizing bias within an individual CME activity. Many commercially funded activities can have an additional cumulative effect that blurs the distinction between drug marketing and professional education. ACCME's standards, both current and proposed, do not directly address commercial influence that can accumulate across a substantial number of commercially funded CME activities.

Shifts in CME Funding

The sources funding CME activities have shifted appreciably during the past 10 years. Long-term data are difficult to track across all CME providers because central reporting is not required. However, the Society for Academic CME has tracked CME funding at medical schools for almost two decades.4 Table 1 presents data for CME income and related activities in 1993 and 2001. The dollar amount of direct institutional support for the CME unit did not change, representing a 27% decrease when adjusted for inflation¹⁷ and a 41% decrease when considering the greater number of CME hours produced. Huge increases in commercial support have more than offset the decrease in institutional funding. Even when adjusted for inflation and increased hours of CME, commercial support increased by 188%. More importantly, by 2001, commercial funding was greater than the combined income from all other sources. Increased commercial funding supported the 54% (inflation adjusted) increase in the typical honorarium paid to guest faculty, shifting from a token professional recognition toward a fee-for-service payment.

Why would support from medical schools decrease? During the past decade, institutions providing health care have been under enormous pressure to reduce costs. Managed care plans are limiting payments; governmental reimbursements from Medicare and Medicaid are not rising as fast as health care costs; academic medical centers and hospitals have little surplus revenue from

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Table 1 Median (50th Percentile) Values for Medical School CME Unit Income, Guest Faculty Honoraria, and Courses for Community Physicians in 1993 and 2001

Category	1993*	2001*	% Change	% Change Adjusted CPI [†]	% Change Adjusted CPI and CME Hours [‡]
Income from:					
Medical school	\$44,000	\$45,000	+2	-27	-41
Registration fees and miscellaneous	\$225,000	\$484,000	+115	+75	+23
Commercial support and exhibit fees	\$106,000	\$534,000	+404	+310	+188
Typical honorarium for guest faculty	\$500	\$1,000	+100	+54	
Number of:					
CME courses (live)	57	70	+23		
CME hours certified for courses	554	786	+42		
Community registrants	3,966	5,575	+39		
Number medical schools responding	72	68			

^{*}Source: Society for Academic CME.4

clinical activities to subsidize medical education; and increasing clinical workloads are reducing the time physicians can devote to teaching. These shifts have been widely discussed regarding undergraduate and graduate medical education. Little attention has been paid, however, to parallel reductions in direct and indirect institutional support for CME. In general, CME units have been expected to be increasingly self-supporting through external funding.

Commercial companies—particularly pharmaceutical manufacturers—have provided that funding. The ACCME publishes annual data from all nationally accredited CME providers, with comparable data on all income from commercial sources available from 1998 to 2002. Across those 5 years, the total annual CME income of nationally accredited CME providers increased from \$888 million to \$1.6 billion. The percentage of annual income pro-

vided by commercial sources increased from 48% to 58%. Table 2 provides more detail for 2002. Comparing the last two columns shows that most national CME providers would have less income than expenses if commercial funding were withdrawn. Although no data are available concerning the funding of locally accredited CME providers, anecdotal reports suggest that they also receive substantial commercial funding.

Why would commercial funding increase to this extent? Sales of prescription drugs in the United States in 2000 totaled \$122 billion, more than 10% of all personal health care expenditures. The United States is the only developed country that does not control the price of drugs, and it is the principal source of profit for pharmaceutical manufacturers worldwide. The greatest profits are typically made on recently released drugs with several years remaining under patent.

[†]Adjusted for the 23% increase in the CPI over the 8 years. ¹⁷

[‡]Adjusted for the 23% increase in the CPI over the 8 years¹⁷ and the 42% increase in CME hours certified for courses. CME = continuing medical education; CPI = Consumer Price Index.

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Table 2 Nationally Accredited CME Providers' Income for 2002, Ranked by Percentage from Commercial Sources

Organization Type	Number of CME Providers	Total Income (\$ million)	% Income from Commercial Support and Exhibit Fees	% Surplus Income (income ÷ expenses)
Communications company	27	141	97	19
Education company (other)	63	201	83	15
Education company (physician owned)	13	35	70	43
Health care delivery system	21	23	63	1
School of medicine	117	276	59	7
Voluntary health association	8	8	56	4
Hospital	51	33	53	1
Other	61	73	53	39
Consortium/alliance	5	13	52	5
Publishing company	15	51	52	22
Physician member organization (specialty)	197	516	51	38
Physician member organization (nonspecialty)	13	15	47	18
Not-for-profit foundation (501c3)	52	120	47	15
State medical society	20	10	30	53
Government or military	16	80	7	-2
Insurance company/managed care	7	1	5	-49
Total or overall percentage	686	1,596	58	20

Adapted from ACCME.20

Physicians directly control access to prescription drugs. Pharmaceutical manufacturers have strong commercial incentives to increase physician awareness of new drugs as rapidly as possible through all acceptable means.

During the last half of the 1990s, pharmaceutical manufacturers released an unprecedented number of new drugs, with equally unprecedented marketing funds to make physicians aware of these drugs. In the early 2000s, the release of new drugs slowed somewhat.²² A parallel decrease in the flow of marketing dollars was expected. However, the expansion of marketing practices had increased societal concerns about pharmaceutical manufacturers inappropriately influencing physicians. Anticipating federal action, the

pharmaceutical industry adopted a code prohibiting a number of activities used in drug marketing.23 Shortly thereafter, the Office of Inspector General, U.S. Health and Human Services, issued a guidance regarding fraudulent practices related to CME and many other activities.24 No longer acceptable are marketing practices such as lavish hospitality or payments through sham consulting arrangements. With restrictions on these and other marketing inducements, providing support to independent CME providers remains one of the acceptable marketing practices. With several other marketing avenues closed, pharmaceutical companies are likely to allocate proportionately more marketing funds to CME than ever before.

Effects of Funding Shifts

Decreased support from the health care system and greatly increased support from commercial companies are changing the overall system of CME. CME providers, faculty, and participants are all affected.

CME providers are biasing the overall "curriculum" of topics they address to receive funding from commercial companies. CME providers generally recognize that they now have two important "customers": the physicians who attend courses and the commercial companies that fund courses. The financial viability of many CME activities can be ensured if they include topics related to commercial interests. A study compared the content of conferences not directly supported by commercial funds with CME activities that were totally funded by companies.25 For the conferences without direct funding, 221 presentations addressed 133 wide-ranging topics. The 103 directly funded symposia focused on 30 topics, most of which were related to the products of the funder. Participants perceived no differences in the quality of individual presentations that did and did not receive direct support from commercial companies.

The number of for-profit CME providers has increased with increased commercial funding. Across all types of CME providers, for-profit CME companies depend most heavily on commercial funds (see the top rows of Table 2) and provide CME activities almost exclusively on topics of commercial interest to their funders. The extreme financial and content interrelationships between for-profit CME providers and their commercial "customers" raised concerns about bias within their individual CME activities and across their curriculum of CME offerings, resulting in recommendations that ACCME not accredit "medical education and communications companies" as CME providers. ²⁶

Funding shifts are influencing CME faculty and how they spend their time. Commercially funded CME activities pay higher honoraria than activities that depend on registration fees. Faculty soon learn that they will be better off developing expertise and presentations on topics of interest to commercial sources, using their limited time away from practice to speak on those topics. Some faculty ask for higher honoraria at CME activities funded by commercial companies. The honorarium paid may be determined directly by the commercial value of the presentation to the funding company rather than by the educational value of the presentation to participants. For-profit CME providers anecdotally report basing honoraria on what the company will pay for the individual.²⁷ The presentation may be balanced, but the participation of the speaker is a commercially purchased fee-for-service transaction, not a professional service.

CME participants are consciously or unconsciously more likely to attend CME courses on topics related to commercial interests and overlook other important CME topics. Several factors influence physicians' decisions to participate in CME activities.28 Commercial funding provides the direct incentives of substantially reduced registration fees and enhanced amenities. More indirectly, the artificially increased number of courses addressing a topic related to a product can inflate physicians' perceptions of the importance of the topic. Commercial funding is distorting physicians' perceptions regarding the actual cost of their continuing education as part of the overall costs of health care. Physicians have little information about the amount of commercial funding involved in CME activities they attend. Commercial funding is not obviously linked to the higher marketing costs of commercial products, which are paid by patients. Commercial funds appear to be "free money" to which physicians are entitled.

The dependence of medical associations and societies on commercial funding raises questions about potential conflicts of interest within organized medicine. The last column in Table 2 shows the percentage of surplus income that different types of CME providers generate from their CME activities. Physician member organizations (specialty and nonspecialty) and state medical societies

generate surpluses of 18% to 53% more than expenses. These organizations typically depend on the surpluses to fund other activities of the organization. The next to last column in Table 2 shows that these three types of organizations receive from 30% to 51% of their total CME revenue from commercial funds. Commercial revenue covers substantial CME expenses and provides all surplus revenue. A disinterested observer could wonder if the \$272 million in annual commercial funds received by these three types of medical organizations might soften organized medicine's views concerning restrictions on commercial funding and its influence.

A remarkable aspect of these cumulative changes on the CME system is that no one planned them. The increased commercial funding likely resulted from factors generally increasing all pharmaceutical marketing activities. Corporate product managers typically focus on the likely effects on annual sales when they make decisions regarding budgets for CME support. Longer-term changes in the overall CME system are unintended consequences, resulting from many thousands of offers and acceptances of increased commercial funding for CME over many years. If commercial funding accounted for only 10% of CME revenue, the impact on the overall system would be much less. However, as noted in Table 2, commercial funds are now the majority of all CME revenue. Furthermore, they represent 40% or more of the CME revenue for select types of organizations comprising 93% of all national CME providers. This magnitude and breadth of commercial influence are fundamentally altering the "system." The entire CME enterprise is shifting from norms of professional service toward norms of commercial transactions in content selection, presentation, and attendance.

The medical profession is responsible for addressing increasing commercialism in the CME system. Commercial companies providing funding are not likely to view increasing commercialism as a problem. Their view is not unethical; it reflects commercial practice and norms. Profes-

sional obligations set a different standard. Physicians individually and as a profession should ensure that the transmission of knowledge addresses the overall best interests of patients.

Addressing Commercial Influence on the CME System

The preceding discussion suggests several actions that might be taken to reduce unintended cumulative influences of commercial support on the CME system. The concerns go beyond current efforts focused on individual CME activities. Substantial discourse and even rethinking the larger CME system will be needed before specific actions are taken. The following range of options and associated viewpoints should stimulate a dialogue for action within the medical profession:

- No change. The cumulative commercial influence is not a substantive problem.
- Increase awareness. If physicians, CME providers, speakers, and professional organizations are made aware of the cumulative influences distorting the CME "system," they can act individually to reduce potential biases.
- CME curricula recommendations. As with undergraduate and graduate medical education, organized medicine should provide national curricular guidance concerning CME. ACCME working with specialty societies could periodically list the most important new topics relevant to each medical specialty. Physicians could use this guidance in selecting CME activities. CME providers could use it in developing CME activities. ACCME could use it to assess the extent to which a CME provider is meeting the most important needs of its primary audiences.
- Disclose funding amounts. CME providers should disclose the amounts of funding received from commercial sources. These funds are given as commercial marketing investments, not charitable contributions.

Participants benefiting from the funds should be aware of the amounts and evaluate the potential magnitude of associated bias.

- Limit funding amounts. Impose one or more national limits on the use of commercial support for CME. Limit CME providers to accepting the amount necessary to support uncovered costs of the activity. Limit the use of commercial funds for faculty honoraria to a "modest" amount (e.g., \$500, \$750, or \$1,000). Limit support to a maximum per registrant (e.g., \$50 or \$100 per day). Surplus revenue, higher honoraria, or additional amenities could come from registrant fees, which should reflect registrants' perceptions of the value provided.
- Truly unrestricted CME funds. Accept only gifts of commercial funds that are broadly designated to support activities of the CME provider with no specification regarding particular CME activities or content. CME providers should then independently decide the activities, medical conditions, and topics to which the support will be applied.
- No commercial funds. Allow no commercial funds to be used to support any aspect of CME activities. Any potential for commercial influence should be eliminated.

Context within the Overall Health Care System

Evaluation of the above and other alternatives must occur within the context of the overall health care system. Resources allocated to the overall health care system will be increasingly strained by new options for care and an aging population. Increasing constraints on clinical revenues are likely to continue the reduction of institutional support for our CME system.

The pharmaceutical industry's future interest in funding CME activities that disseminate new knowledge may decrease substantially owing to controls on drug costs. All health care payers have made the reduction of pharmaceutical costs a high priority. Medicare has initiated major national changes to reduce the amount paid for drugs.²⁹ The pharmaceutical industry's interest in marketing to physicians will be reduced by formularies that limit physicians' prescribing choices and by price controls that reduce drug profitability. Future commercial funding for CME could drop to levels at which cumulative biases are no longer a major concern. However, the CME system has become highly dependent on commercial funding. A sudden substantial reduction in drug company funding could threaten the viability of the overall CME system as we know it, if no alternative funding is available.

Can support for the CME system be built more formally into the overall funding of our health care system? The federal government has recognized a central responsibility for funding graduate medical education, incorporating supplemental funding for resident education into Medicare's payments for clinical care at teaching hospitals. Other countries include CME in the formal health care funding infrastructure. For example, the National Health Service in the United Kingdom provides a CME allowance of approximately \$1,000 per year to general practitioners.30 In Canada, the Province of Alberta reimburses approximately \$1,000 annually in CME expenses for all physicians.31 The decentralization of both the U.S. health care system and its CME system complicates shifting the funding infrastructure for CME to a formal basis. Shifts in the organization and funding of CME are likely to be incremental. An acute national crisis in health care financing might result in a radical reorganization of the overall U.S. health care system that includes the funding infrastructure for CME.

Individual physicians would be the major alternative source of CME funding if institutional and commercial funding decrease. Costs would be at least as much as those for CME activities currently offered without commercial support. Currently, the largest subsidization of the CME "system" is the unpaid or underpaid time that physicians donate to teach colleagues. As long as physicians adhere to norms of professionalism

that include an obligation to transmit information, the costs of CME should be affordable through local hospitals, medical schools, and professional societies. Society has provided physicians with the privilege of a standard of living that is well above average, enabling them to take time away from practice to teach and to attend CME activities. However, restructuring within the health care system resulted in physician inflation-adjusted income decreasing 5% between 1995 and 1999. If physician income continues to decrease, physicians who teach may be less willing to donate their unpaid time and physicians who should attend may limit their work-related expenses, including participation in CME activities.

Additional issues in the larger health care system will affect the future of CME. The role and funding of medical associations and societies will be a consideration, given their current dependence both on surplus revenue from their CME activities and on institutionally subsidized time of academic physicians. Aspirations for developing systems for assessing the competence of practicing physicians also will need to be taken into account. 33 Dissemination of new information to physicians will continue to be one of the processes necessary to maintain physician competence and the quality of health care.

Next Steps

In the context of the evolving U.S. health care system, feasible immediate steps to reduce cumulative commercial influence on CME are as follows:

- Medical professional organizations and oversight bodies should inform CME providers, faculty, and physicians about the bias in educational curricula through publications and presentations at professional meetings.
- Physicians should address within their member organizations the effects of commercially supported CME and the dependence of their organizations on that support.

Lessons for Practice

CME providers, faculty, and participants should

- understand differences between professionalism and commercialism in relation to CME activities
- assess the extent to which commercial funding is distorting the curriculum of CME activities they offer, teach, and attend
- encourage national organizations responsible for CME to ensure that increases in commercial funding and in education on topics related to commercial interests do not distract CME providers, faculty, and participants from other knowledge important to patients
- encourage physicians and their professional organizations to include the funding of CME as a formal item in discussions of health care financing reform
- monitor changes in the financing of CME and work to ensure a viable system of CME in the future.
 - ACCME should require CME providers to disclose the amount of commercial funding in addition to the source.
 - Medical specialty societies in coordination with ACCME should annually generate a short list of key new topics by specialty to guide CME development and participation.
 - ACCME should limit the amount of a speaker's honorarium that CME providers can pay with commercial funds to a maximum of \$1,000.

Simultaneously, the process and funding of CME should become a formal item on the agenda for health care financing reform. Funding for CME is already an expenditure in the current health care system. However, these funds are not identified and are informally built into payments for clinical care and products. Funding for CME should be specifically identified and the mechanisms for its distribution consciously planned. A portion of clinical care costs should be designated to support diffusion of new clinical information through CME. For example, governmental partnership in the identification of CME priorities and funding for related CME activities might be part of a national program addressing care quality and cost effectiveness. Funds may be allocated through several means, including direct payments to develop CME activities and designated compensation that physicians can use to pay for participation in CME activities. New funding arrangements should reinforce addressing all important needs of patients.

As alternative, unbiased funding structures evolve for the CME system, the extent of cumulative commercial influence should be reassessed. Further actions regarding commercial influence may or may not be necessary.

Summary

To preserve a professionally responsible system for CME, medicine must recognize and address two powerful economic forces: commercial interests and societal resource limitations. During the past decade, commercial interests predominated. Enormous increases in commercial funding underwrote substantial increases in CME activities available to physicians. Little attention has been paid to the cumulative effects of this increase. The overall curriculum of CME offerings is increasingly biased toward topics that will benefit commercial interests. Companies are engaged in a commercial transaction, providing physicians with access to knowledge that will benefit the company. In accepting commercial funds, CME providers, faculty, participants, and the profession must act to ensure that subsidies for this

knowledge do not distract busy physicians from other knowledge important for patients.

During the coming decade, the predominant economic force on CME is likely to be limitations on societal resources for the health care system, reducing CME funding from all sources. Continuing financial pressures on academic medical centers and hospitals will further reduce their subsidization of their own CME programs and of their physicians' time devoted to CME activities of national medical organizations and societies. Controls likely to be imposed on drug costs will lower drug profitability, reducing manufacturers' interests in marketing products by supporting CME activities. Financial pressures on incomes of individual physicians could limit the extent to which they will pay higher fees for CME to offset reductions from other sources. Physicians and their professional organizations should recognize these threats to the funding and infrastructure of the CME system and work to ensure a viable CME system in the future.

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