

CME AND ITS EVOLUTION IN THE ACADEMIC MEDICAL CENTER: THE 2011 AAMC/SACME HARRISON SURVEY



Executive Summary

This is the fourth annual survey of academic continuing education and professional development programs sponsored jointly by the Society for Academic CME (SACME) and the Association of American Medical Colleges (AAMC) in collaboration with the Association of Faculties of Medicine of Canada (AFMC). It continues to demonstrate a viable and robust academic enterprise engaged in the ongoing education of practicing physicians and other health professionals. Named for R. Van Harrison, of the University of Michigan, to acknowledge his dedication and commitment to the survey's history and development, it serves an increasingly important role in achieving the missions of the teaching hospitals, academic medical centers, and medical schools of the United States and Canada.

The survey undertook a rigorous methodology to identify 286 academic CME units in teaching hospitals, academic medical centers (AMCs), and medical schools in the United States and in medical schools in Canada. The following major findings were gleaned from the 178 units (62 percent) responding:

- Despite the diversity of settings, from the traditional medical school environment, to the teaching hospital without formal linkages to traditional medical school structures, to the clinical setting, CME units reported such a similarity of mechanisms, activities, and roles that distinctions appear arbitrary at best.
- Depending on location, the audience for CME activity shifts: In U.S.-based AMCs, 60 percent of programming is directed at an internal audience (faculty and staff), 40 percent externally. In Canada, these percentages are reversed.
- In addition to traditional accredited CME services, CME units are expanding to provide quality and performance improvement activities or planning; continuing professional development for an interprofessional audience that includes health care teams; and faculty development to improve teaching and clinical skills and to increase understanding of regulatory changes. Linkages are also noted to graduate medical education (GME) programs and simulation centers. This expanding role is reflected in a broadening skill set among CME staff.
- CME units are finding opportunities to engage with community partners such as community or other hospitals (such as the VA in the United States) and with medical societies, local nonprofits, health departments, and specialty societies. These outreach activities include: visiting speakers, academic detailing (i.e., trained nurses, pharmacists, and other health professionals delivering educational messages to individuals or small groups of community-based clinicians), opinion leaders (individuals identified as educationally influential in their own setting) and/or train-the-trainer programs, live teleconferences and webcasts, and on-line social networking.

- CME units noted a need to rebalance sources of revenue to offset a continued decline in commercial support, which now provides roughly a third of income, by increasing institutional support from medical school, hospital and health system, and other sources.
- CME units undertook an active presence among some centers in research, evaluation, and best practices—a hallmark of academic CME. The research enterprise is more widely embraced among Canadian CME units, a product of former accreditation criteria. While less widespread in the United States, research in CME among those units generated several millions of dollars in revenues and reflects a broad array of scholarly and innovative activities. A sizable portion of this research is supported by industry funding, reformulated from simple conference support to competitive granting processes focused on clinical performance and health care outcomes.

Finally, despite many strengths and considerable progress, academic CME and the institutions that support them demonstrate several missed opportunities. The process of alignment with the mission of academic medicine is by no means complete or widespread. Areas of possible interest both internal and external to the AMC that could be exploited include, for example, building synergies with faculty practice plans, electronic health record systems, and hospital accreditation processes, among others. In addition, because alternative education formats such as reminders at the point of care, audit and feedback, and academic detailing have been reported to be more effective than traditional didactic educational activities, their inclusion on a more widespread basis appears to be an important area for further attention.

While embraced by some centers, CME research and development entities appear sparse, relatively unfunded, and unconnected to health services, population health, implementation sciences, and other similarly focused research enterprises. To achieve the potential of a truly academic CME unit, increasing the focus on robust research opportunities inherent in federal granting opportunities afforded by comparative effectiveness and dissemination and implementation deserves attention and support.

Background and Methods

Background

This is the fourth annual survey jointly sponsored by the Society for Academic Continuing Medical Education (SACME) and the Association of American Medical Colleges (AAMC), in collaboration with the Association of Faculties of Medicine of Canada (AFMC). The survey was derived from previous surveys of academic CME providers conducted over the last two decades by SACME. Its name, “The Harrison Survey,” recognizes the dedication and commitment of R. Van Harrison, Ph.D., of the University of Michigan, who led the Society’s CME bi-annual survey efforts over this period.

The Harrison survey reviews the organization of the CME unit, its relationship to the academic medical center in which it resides, aspects of its ‘product’ (beyond courses to include other educational activities and interventions), its funding base, research and innovation, and other items related to the operation of the CME unit. For the first time, a concerted effort was made to reach out to members of the Council of Teaching Hospitals (COTH) and their active CME divisions, and a rigorous process was undertaken to determine where in the organization the CME unit was situated.

Methods

In order to determine the recipients of the survey, and their ‘location’ organizationally, administratively, physically, or financially in a medical school or teaching hospital, the following procedure was followed. First, in June and July of 2011, a thorough internet search was conducted, thereby identifying 286 academic CME units. This list was cross-referenced with that of the Accreditation Council for CME (www.accme.org) to ensure accuracy and used existing email lists of medical schools and teaching hospitals, and their CME directors, maintained at the AAMC. In most instances, the directors could be identified by such a process.

Second, to accommodate for those instances in which a director’s name could not be located by this procedure, a telephone solicitation was undertaken. This reached 85 individuals, a subset of the original 286. Further, more in-depth interviews with a randomly selected subsample of 26 directors representing both teaching hospitals and medical schools were used in part to confirm the CME unit’s administrative locus, directors’ names, and other data. Finally in this step, an email was sent to each director to confirm his/her role and to announce the upcoming survey. As determined by the email addresses, and by responses from the directors, many directors had roles in both medical schools and teaching hospitals.

Third, we classified the individual units as: 1) medical schools, in both Canada and the U.S.; or 2) teaching hospitals in the U.S. The latter category, perhaps better described as the academic medical center (AMC), included many medical school CME divisions previously classified as medical schools. However, by website, directors' input, and/or email addresses, these 'medical school' CME divisions were determined to have AMC or hospital roles and responsibilities. In this manner, 70 CME units previously classified as medical school units were re-classified as teaching hospitals. This process, more thoroughly explored below, allowed for a more careful examination of internal relationships—a key objective of the survey and, in fact, academic CME itself.

Last, the survey was then sent to the recipient director with a copy to a more senior academic officer (an assistant or associate dean, vice president, or chief academic officer) on August 22, and repeated on two occasions in September. The survey closed October 7, 2011.

This report summarizes—unless otherwise specified—only data from the U.S. and Canadian medical schools and U.S. teaching hospitals with active CME units whose data was available at the time of reporting. Wherever possible, comparative results from earlier surveys are used to mark possible trends, although comparisons are limited by the re-classification of medical schools and teaching hospitals. The report thus focuses on 'academic CME' and represents a continuum of continuing professional development (CPD) or educational activities located in academic medical centers.

Reported in seven sections, the 2011 Harrison survey describes:

- 1) The survey response rate and respondent characteristics
- 2) The organizational mission, structure, function, and policies of the CME unit
- 3) Organization of CME in the academic medical center
- 4) The product and focus on academic CME
- 5) The funding of academic CME
- 6) Research, development, and best practices
- 7) Discussion, conclusions, and strategic directions

Section 1: Survey Response Rate; Characteristics of Respondents

286 CME units in U.S. teaching hospitals and U.S. and Canadian medical schools were eligible for and received the survey, of which 178 (62%) responded. Of these, roughly 94% were U.S.-based, 6% Canadian, and 98% were nationally accredited providers. The response rates for three entities—Canadian medical schools, U.S. medical schools, and U.S. teaching hospitals or AMCs—is displayed in Table 1. Response rates of medical schools—especially in the U.S.—exceeded that of teaching hospitals, perhaps reflecting the history of SACME and its relationships in the medical school setting. While recorded in this fashion, it is clear from organizational and reporting data (see below) that the distinction between the medical school and the AMC or teaching hospital, at least in the U.S., is blurred, giving rise to the concept of the CME unit embedded in the academic medical center. Further augmenting this finding, an increasing number of CME units, although reporting to medical school leadership and recognized as the ‘medical school’s CME program’, are in fact situated in the teaching hospital.

Table 1: Response Rate by Canadian and U.S. Medical Schools and U.S. Teaching Hospitals*

(*U.S. teaching hospitals category includes medical school CME units with roles and responsibilities in the academic medical center)

Institution Type	Total Invited	Total Responding	Percent Responding
Canadian Medical School	17	11	64.7%
US Medical School	60	44	73.3%
US Teaching Hospital	209	123	58.9%
All Types	286	178	62.2%

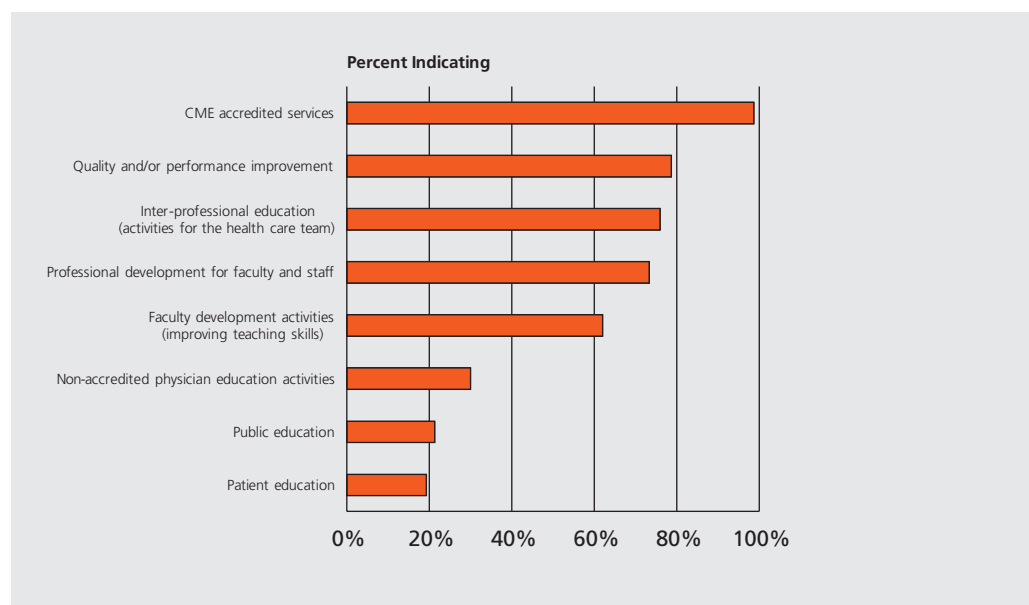
Section 2: Organizational Mission, Structure, and Policies of Academic CME units

Roles and Scope of the CME Unit

CME units were asked to describe their activities, which ranged from providing certified CME services to those related to other efforts in the academic medical center; 150 units responded to this question (Figure 1). Nearly 100% provided certified CME; smaller but impactful percentages (roughly between 70-80%) provided quality and performance improvement activities or planning, continuing education for an inter-professional audience, and clinical professional development for faculty and staff; slightly smaller percentages supported faculty development to improve teaching skills (roughly 60%). Of interest, roughly 30% provided at least a small number of non-certified educational services and 20% provided patient or public education programming. This broadening array of roles and functions of the CME unit is reflected in the skill mix of CME unit staff members, reported below.

In contrast to more ‘traditional’ concepts of CME provider activity, over three quarters of reporting academic CME units provide services for quality and performance improvement, education for the health care team, and professional development for faculty and staff.

Figure 1: Roles and Scope of the CME Unit (150 respondents)



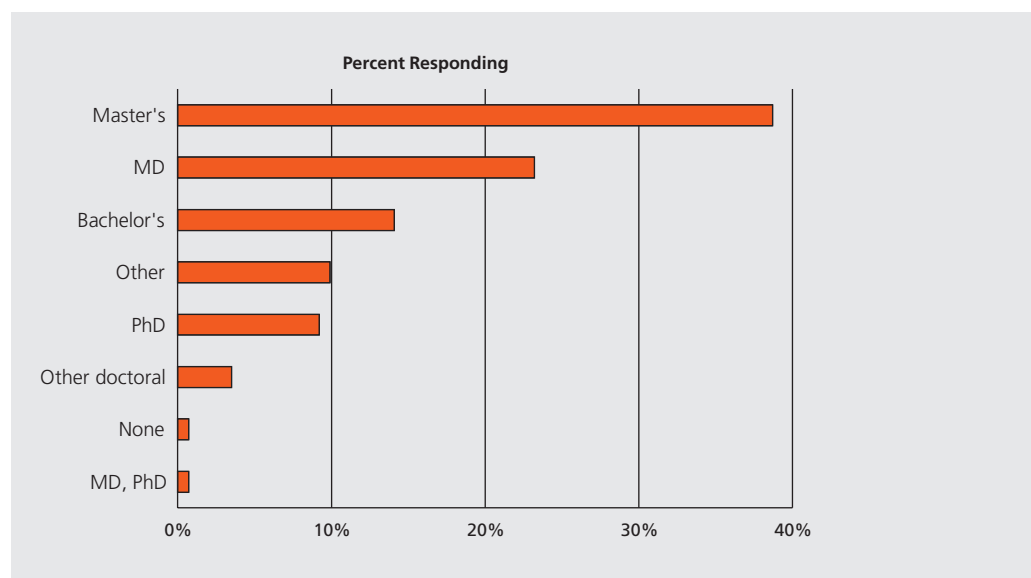
Who leads the CME Unit? Background and Compensation of the CME Director

Background and Training of the CME Unit Leadership

CME units were asked to provide the title and training of the person organizationally responsible for CME in the AMC. Over one-third (34%) were led by an assistant/associate or vice dean; almost half (46%) by a CME director, and roughly one-fifth by others, including titles such as executive director, program manager, or assistant/associate vice president.

Of these individuals with responsibilities for the management of the CME unit, the majority (over one-third) were master's level trained, with degrees in education, public health, and health professions. Nearly a quarter were represented by physicians and roughly 10% by Ph.D.-trained individuals. Noted in other sections of the survey, most units led by a master's-trained director reported to an associate dean for education or, in some instances, to a CME committee. This figure has remained roughly the same over a four year period. Other degrees and more accurate percentages are displayed in Figure 2.

Figure 2: Background and Training of the CME Unit Leadership; Highest Level of Formal Education Attained by Director (142 respondents)



The Compensation of the CME Director

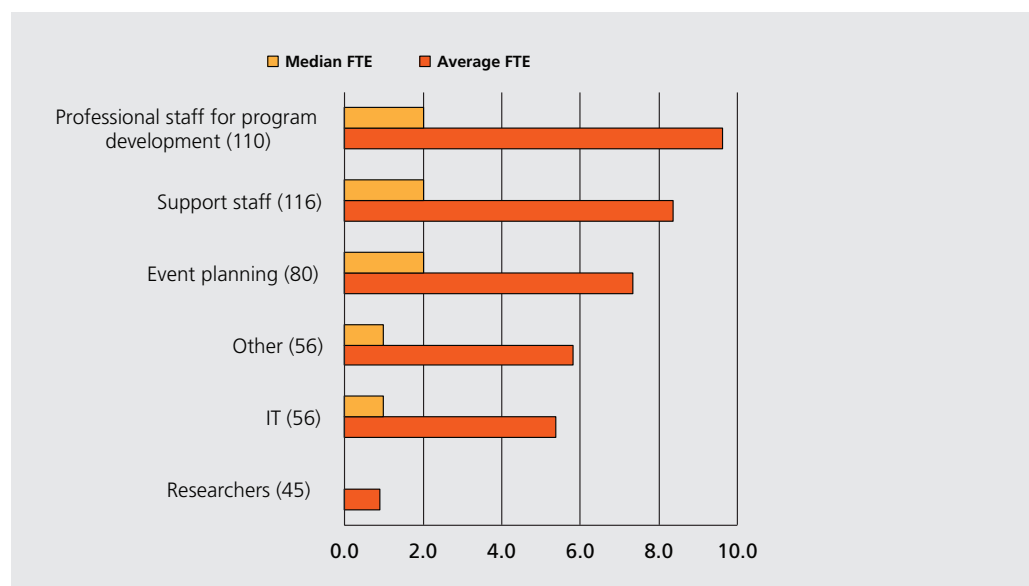
The survey also gathered information about compensation for the CME ‘director’. 117 units responded, indicating an average annual salary of \$88,000 and a median of \$80,000, roughly similar figures for both the U.S. and Canada. Interpretations of these salaries are made difficult by considerations of part-time versus full time compensation for physicians who occupy this role, and by the variable backgrounds and roles of the director.

Staff Complement and Roles of Individuals in the Academic CME Unit

Respondents were asked to indicate the amount of Full Time Equivalent (FTE) resources (i.e., amount of time spent in an area multiplied by the number of staff members) that CME units possessed in each of the following areas: research, information technology, event planning, logistical support, and other roles. These figures are displayed in Figure 3. Not all units possessed all functions. For example, 110 units reported a median of two staff members dedicated to program development; 116 units reported a median of two staff members described as support staff, such as registration personnel; 80 units reported a median of two staff members dedicated to event planning; and 56 units reported a median of one staff member devoted to information technology (IT) functions. While meeting organization and registration are reflected in a large percentage of these roles, notable other staff responsibilities include educational consultation in meeting planning, IT development and functions, and research, reflecting the increasingly wider array of roles reported in this survey. ‘Other’ roles reported included grant writing, business analysis and operations, PI/QI data coding specialists, strategic affairs and planning, graphics and communications expertise, academic detailers, and librarian/information specialists (Figure 3).

Professional staff for educational program development comprise the largest percentage of staff component in academic CME units.

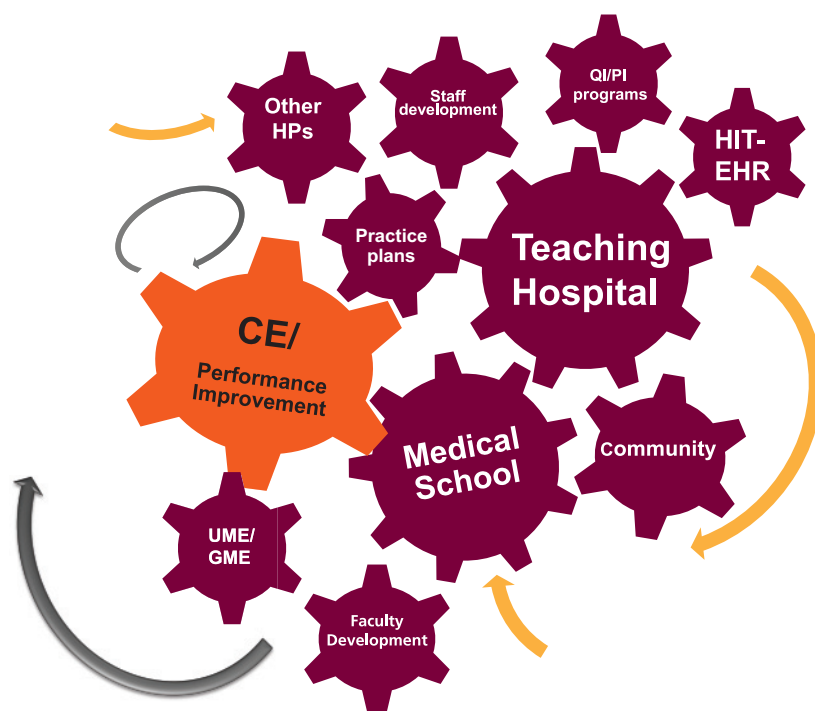
Figure 3: FTE (Full Time Equivalent) Complements (i.e., amount of time spent in an area multiplied by the number of staff members)



Section 3: Organization of 'CME' in the Academic Medical Center

Developing activities to achieve the missions of the academic CME unit requires an understanding of the organizational and reporting structures of CME in the setting of the modern academic medical center (AMC), diagrammatically represented in Figure 4. Here, components of the AMC are represented as cogwheels, comprising elements such as the faculty practice plan, teaching hospital, units which serve the educational mission of the medical school, and those elements outside the academic medical center, including the community, among others. Within this rough framework, data are presented related to the organization of the unit and its relationships internal and external to the AMC.

Figure 4: Diagrammatic Representation of the 'Working Parts' of the AMC



Reporting Structure

Table 2 outlines all respondents' reporting data, revealing a wide variety of reporting mechanisms within the AMC organizational structure. A breakdown of these reporting mechanisms by country is instructive. In Canada, a relatively straightforward picture emerges; of 11 schools reporting, five CME divisions reported to the dean and four to a senior dean for education. In the U.S., the frequent position of CME units in the academic medical center makes these reporting relationships somewhat more complex. For U.S.-based CME divisions identified as being situated in medical schools, roughly one-third (14) reported to the dean, one-third (14) to a senior dean for education, and the remaining one-third reported elsewhere, some to hospital leadership including the chief executive or operating officer or the director of education. For those centers that were identified as hospital or health system-based, 16 reported to the dean of the medical schools, 36 to a senior educational dean, and a further 11 to others representing medical school leadership. Of the remainder, 33 reported to the hospital leadership (CEO or COO), five reported to the director of education, and four reported to a hospital committee. Table 2 displays results aggregated for all U.S. and Canadian CME units.

A wide variety of reporting structures exist among academic CME units: while most report to medical school leadership, some report to hospital or health system or other system leaders.

Given its consideration of hospital CME units, this more robust and detailed report contrasts somewhat with that of previous years. For example, the 2010 report (reflecting 2009 data) displayed much smaller percentages of 'medical school' units reporting to both the dean of the medical school and the CEO/COO of a hospital (8%), or to the CEO/COO of the academic health center or the hospital directly (less than 1%).

Table 2: Reporting Structures of Medical Schools and Teaching Hospitals (178 respondents)

The Dean of the medical school only	Vice/ Associate Dean for Education only	The CEO or COO of the academic health center or the hospital only	Both the Dean of the medical school and the CEO/COO of a hospital	Other	No Relationship Specified	Total
35	54	4	12	32	41	178

Internal Relationships

Beyond reporting structures, the relationships developed within the AMC also foster the achievement of missions and functions of the academic CME unit. Respondents were provided a list of programs, departments, or units internal to the academic medical center which might exist in their respective settings and asked to select the status that best described the relationship between the CME office and each of those programs, on a scale ranging from no interaction to minimal, moderate, or extensive interaction. Minimal interaction was described as irregular or occasional activity linked to the program or unit, whereas extensive interaction was characterized as ongoing planning or developmental activity, conjoint programming, shared goals and strategic directions, or shared resources. The internal relationships included faculty development programs, library services, conflict of interest committees, medical student or resident educational programs, compliance education, physician performance or quality improvement units, faculty practice plans, continuing education for other health professions, health services research, public health, employee or staff professional development, and public education (for example mini medical school).

Among academic CME units in U.S.-based medical schools, strong relationships are noted with CE for other health professions, faculty development, and performance and quality improvement programs and entities. Weaker relationships exist with libraries, faculty practice plans, electronic health records, knowledge translation and implementation science, hospital accreditation and UME programs.

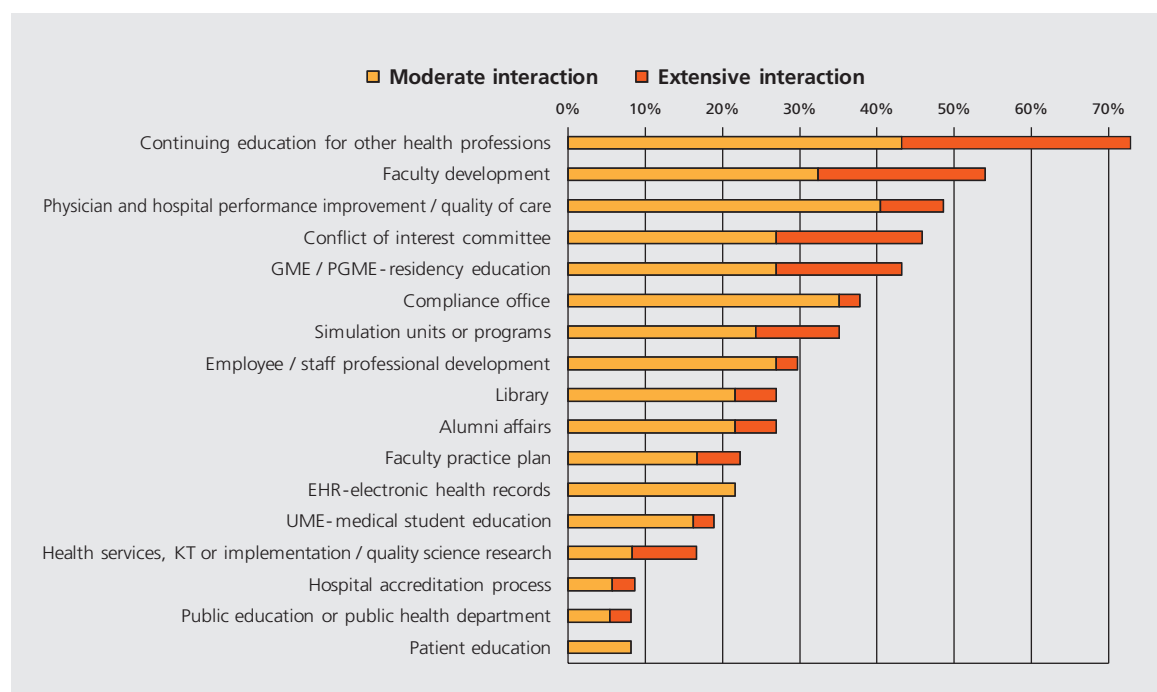
Figure 5 conveys findings related to those CME units based in U.S. medical schools only, given their instructive value relative to year-to-year comparison and the need of the medical school-based CME unit to form such relationships in order to achieve overall AMC missions and accreditation requirements. Several relationships are of interest when responses for ‘extensive’ and ‘moderate’ interaction are combined. Of the 46 U.S. and Canadian medical school-based units shown in Figure 5, 70% indicated moderate or extensive interaction with continuing education programs for other health professions; while over 50% expressed a moderate or extensive interaction with faculty development programs. Between one-third and one-half (35-50%) reported extensive or moderate relationships with physician or hospital performance improvement programs, simulation centers, conflict of interest and/or compliance programs, and with resident education. These findings are roughly comparable to those of last year’s survey with the exception that the ranking of

physician and hospital performance and quality improvement relationships has risen substantially in this time period—from ranking sixth to third. Not recorded in last year’s survey, the relationship of CME units with simulation centers and programs also appears sizable; roughly two-thirds of CME units reported such relationships.

Several interactions are much less frequent or non-existent among reporting units, providing examples of opportunities for academic CME, and the AMC itself. For example, roughly 20-30% reported no interaction with the libraries, faculty practice plans, or electronic health records. Smaller percentages related to health services and/or knowledge translation or implementation research; or to programs and departments dedicated to UME, hospital accreditation, alumni affairs, or public and

patient education. Not shown in graphic form, academic CME units in U.S. teaching hospital settings demonstrated stronger relationships in CE for health professions and physician or performance improvement activities. In contrast, Canadian schools' CME units interacted more regularly with public health and public education and with health services (knowledge translation) research, reflecting sizable federal or provincial initiatives in these areas.

Figure 5: Intra-Institutional CME Interactions
Respondents at U.S. and Canadian Medical Schools (46 respondents)



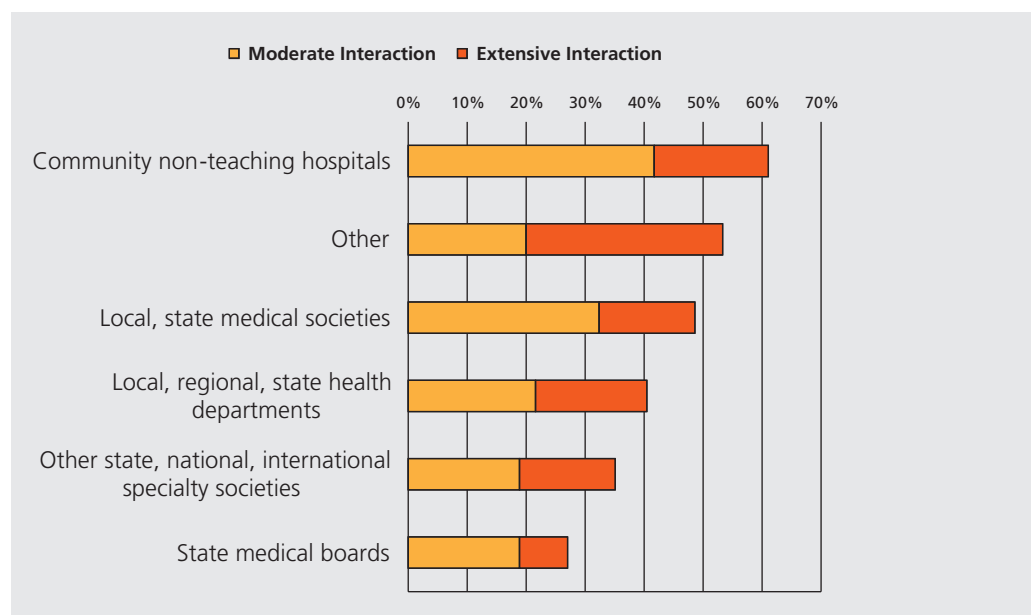
External Relationships

The survey also queried relationships between the CME unit and organizations external to the AMC. A list of community and state/provincial organizations was provided to respondents, including local/county/state health departments, state medical boards, community hospitals, VA hospital(s), local and state or provincial medical and specialty societies, Area Health Education Centers (AHECs), managed care providers or third party payers, and community or state non-profit organizations.

Figure 6 highlights external relationships for academic CME units located only in U.S. and Canadian medical schools. Of interest, among the 47 respondents, U.S.-based CME units indicated most interaction with community hospitals or VA hospitals. A relatively smaller but important percentage reported interaction with medical societies (slightly

less than half), community or state non-profit organizations, local/county/state health departments (roughly 40%), and state specialty societies (35%). Other sparsely-reported relationships included state or local non profits, international societies, and hospital associations. Little between-year differences are noted. Not shown in Figure 6, Canadian data demonstrated similar results, although VAs, AHECs, and other entities do not exist in the Canadian context. Canadian units enjoy a stronger relationship with local, regional, or provincial health departments and with provincial medical boards.

Figure 6: Extra-Institutional CME Interactions of U.S. and Canadian Medical Schools (47 respondents)



Section 4: The Product and Targets of Academic CME

The major ‘product’ of CME units’ activities—courses, conferences, meetings, grand rounds, M&M conferences, journal clubs, and related educational formats—is widely reported in the U.S. by the Accreditation Council for CME (www.accme.org) and is, therefore, not reported here. Canadian data resulting from this survey are reported elsewhere (www.aamc.org/initiatives/cme) and similarly are not represented in this report.

Rather, the 2011 Harrison survey focuses on two aspects of programming:

- the focus or target ‘audience’ of academic CME
- alternative and innovative formats, of which two types are presented
 - o those related to methods useful internal to the AMC
 - o those related to its external programming relationships

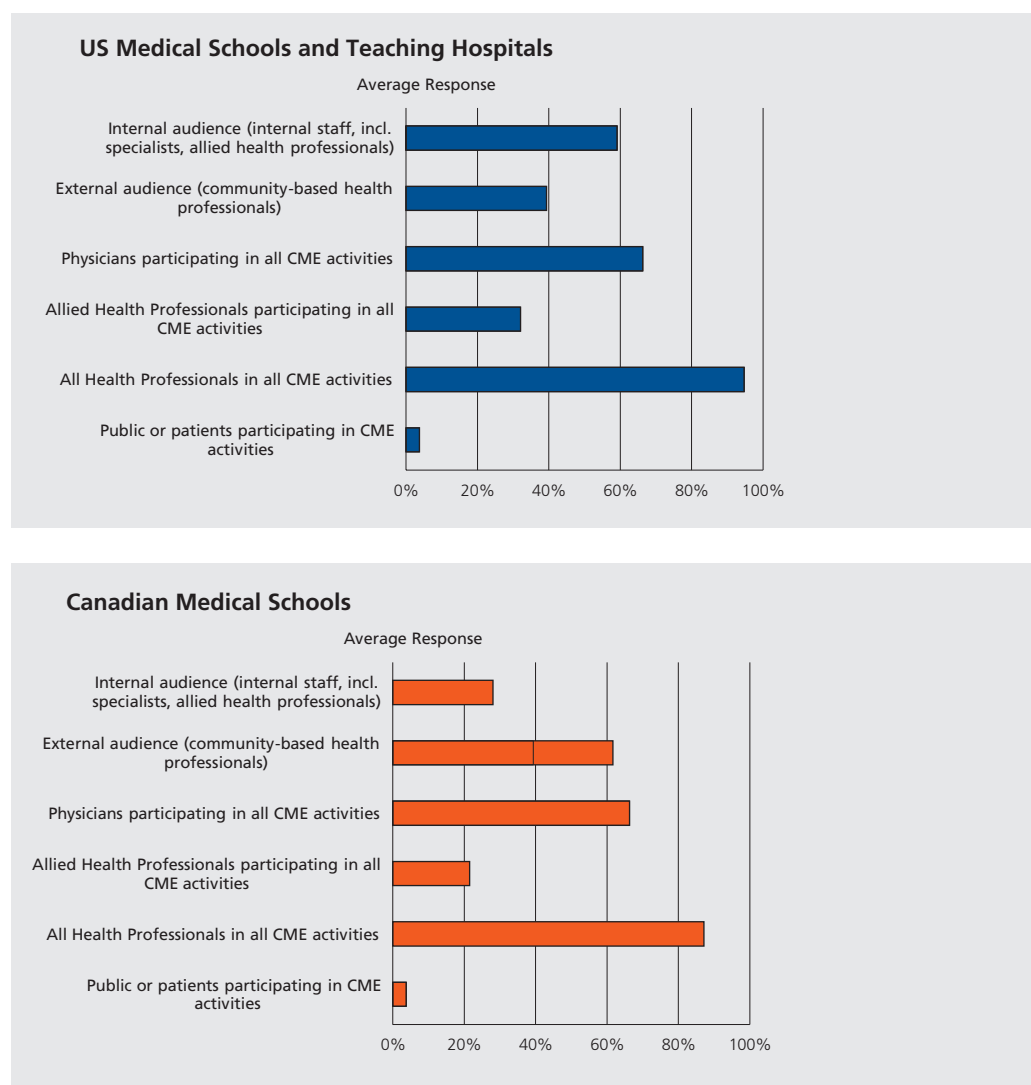
In particular, the alternative formats (reminders, audit and feedback, among others) have been reported to be more effective than traditional didactic educational activities; thus, their inclusion here reflects progress in the academic CME field and the result of applied research. Also, among CME ‘internal’ activity are data related to faculty development activity, focused on staff and faculty members, and attempts at improving teaching, research or clinical skills—a reflection of the increasing linkage of academic CME units to the work of the AMC.

Among academic CME units in U.S.-based AMCs, 60% of programming is directed at an internal audience (faculty and staff), 40% externally. In Canada, these percentages are reversed.

Internal or External Focus? The Changing Target of Academic CME Activities

127 U.S.-based CME units in AMCs (medical schools and teaching hospitals) responded to three sets of paired questions regarding the ‘target audience’ for all CME activities; 10 Canadian centers responded to the same question (Figure 7). To the question of internal (faculty and staff of the AMC) versus external (regional physicians and allied health professionals), U.S. units reported reaching an audience comprising 60% internal versus 40% external participants. In Canada, these numbers were virtually reversed. To the question of physician versus non-physician participants, both U.S. and Canadian respondents reported that their audience was comprised of two-thirds physicians and one-third (or less in Canada) non-physicians. Finally, to the question of health professionals’ participation versus public or patients, both Canadian and U.S. CME units reported a very small percentage (2-3%) of public or patient participation.

Figure 7: The Audience for CME Activities (127 U.S., 10 Canadian respondents)

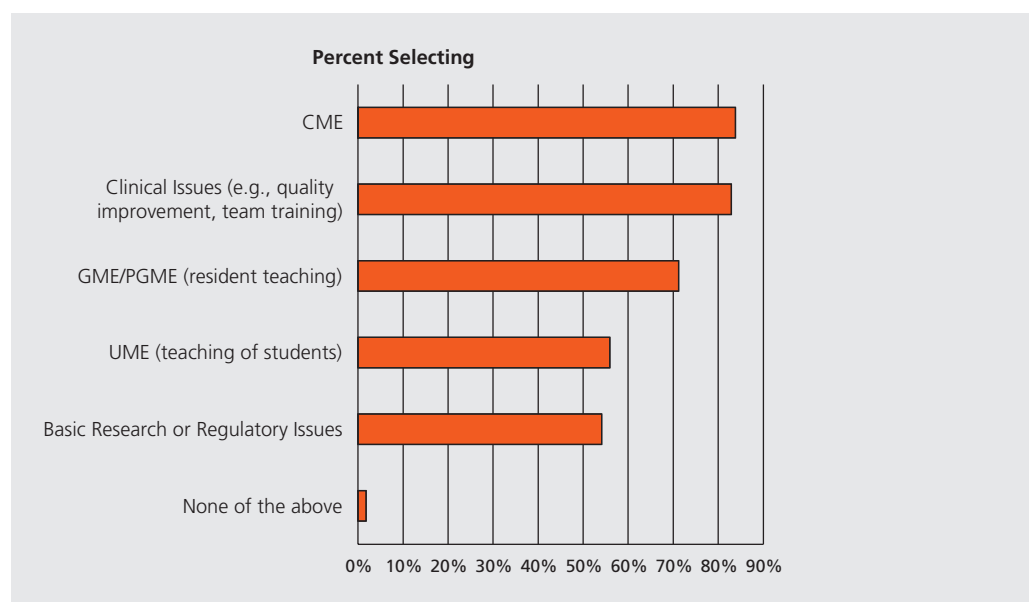


Alternative ‘Internal’ Programming

Faculty Development Activities

111 units (82% of the total respondent pool) responded to the question, ‘Does the CME unit participate in faculty development activities?’ This question preceded an exploration of the types of ‘faculty development’—education of faculty members related to the mission of the AMC—undertaken or accredited by these units. They included responses related to teaching or educational development. Here, the majority of respondents (83%) undertook activities related to improving teaching, educational scholarship, and related activity for faculty active in CME, and in effecting clinical improvements (e.g., team training). Smaller percentages (71% and 56% respectively) developed programs to improve graduate and undergraduate medical education. Faculty development activities were also reported as relevant to research and regulatory education (53% of respondents) (Figure 8).

Figure 8: Activities Aimed at Improving Faculty Teaching Sponsored by the CME Unit (111 respondents)



Audit and Feedback

Several sites report the use of audit and feedback as an auxiliary tool to augment the effectiveness of CME interventions. Respondents were asked to report on educational activity related to audit and feedback programs. 90 CME units responded, of which slightly less than one-fifth (18%) indicated they had developed such programs, often with hospital personnel. In addition, the survey asked about the frequency of reminders at the point of care. Here, 88 units responded, of which 13-15% indicated they had participated in such programs in the hospital or practice setting with health system support.

Alternative 'External' Formats

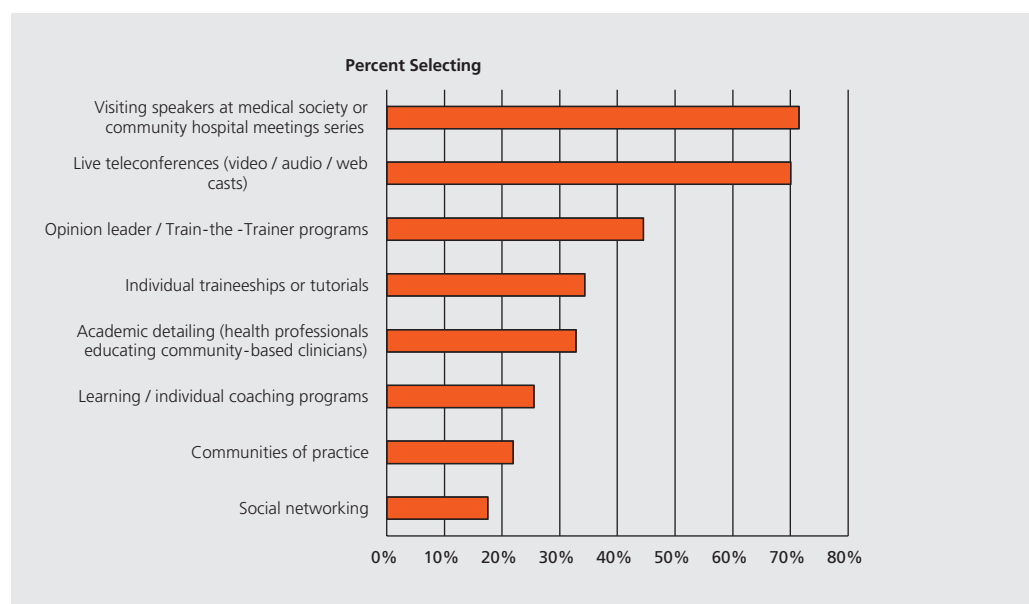
Respondents were asked to select those activities characterized as 'outreach', i.e., those used to serve a regional audience of learners. These included the following formats:

- visiting speakers at medical society or community hospital meetings series
- academic detailing, i.e., trained nurses, pharmacists and other health professionals delivering educational messages to individuals or small groups of community-based clinicians
- opinion leaders (individuals identified as educationally influential in their own setting) and/or train-the-trainer programs
- individual traineeships or tutorials
- live teleconferences (using video, audio, or webcasts)
- individual coaching or mentoring programs
- communities of practice, self-identified groups whose discussion is mediated by the CME office
- social networking activity

Beyond the traditional short course and rounds, a significant proportion of academic CME units develop and implement a wide variety of internal and external educational strategies—feedback, academic detailing, opinion leader or train-the-trainer programs, and teleconferences, among others. Smaller numbers also develop social networking strategies and provide individual coaching or mentoring.

137 units reported (Figure 9). Of these, roughly 70% employed visiting speakers' programs and live teleconferences (by video, audio, or webcasts) to reach a regional audience, and over 40% reported using opinion leader or train-the-trainer programs to communicate clinical content to regional or local audiences. Smaller numbers (approximately one-third) reported using at least one program comprising academic detailing or individual traineeships and tutorials, while roughly one-fourth employed individual coaching, communities of practice, and social networking for the same purpose. While visiting speakers and teleconferences have been a staple of academic CME unit activity for over a decade, as reported in the last three Harrison surveys, academic detailing, social networking and communities of practice, and individual mentoring or coaching appear to have assumed a larger role.

Figure 9: Types of Outreach Activity Implemented to Serve a Regional Audience of Learners (137 respondents)



What Percentage of Activities is Remedial or Mandated?

New in this year's survey, respondents were asked to what extent their activities were mandated by state or local requirements and/or remedial. 85 units responded, with approximately 8% of these units reporting such activity.

Section 5: The Funding of Academic CME

The survey asked several questions related to the funding structures and policies, income, and expenses of the CME unit budget. While a wide variety of data can be presented here, the report focuses on only three important issues: the overall size and distribution of revenue streams for an operation most often funded by external rather than internal sources; the extent of commercial support; and the distribution of dollars internally and externally. Figure 10 describes the re-balancing of CME revenues, alluding to the situation of five years ago in which heavy commercial support (frequently well over 50%) was a notable feature of the CME enterprise.

Figure 10: A Rebalancing of the Revenues of CME



Academic CME units continue to rebalance and diversify their sources of revenue. Continued decline in commercial support is noted, offset by: granting mechanisms provided by industry; institutional support increases from both hospital and health system; and from medical school sources.

Academic CME Revenues

For calendar year 2010, CME units were asked how much total revenue they generated and then to indicate revenue sources from a variety of previously-selected items, including commercial support—a topic of sizable interest over the past five years. Table 3 represents a more complete breakdown of revenue sources. In total, 122 CME units reported realizing a total of \$338M in annual revenues, with a mean of \$2.8M and median of \$1.4M. 119 units reported a total expense of \$266M, with a mean of \$2.2M and a median of \$920K.

Table 3: Revenue Streams and Expenses for Academic CME Units*

(*Teaching hospital category includes U.S. medical schools in which CME divisions have roles or responsibilities in the hospital setting)

CME Funding	N	Mean	Median	Total
Canadian Medical Schools	8	2,017,728.63	1,875,350.00	16,141,829.00
U.S. Medical Schools	33	2,673,335.48	1,189,468.00	88,220,071.00
U.S. Teaching Hospitals	81	2,884,456.52	1,400,800.00	233,640,978.00
All Types	122	2,770,515.39	1,390,531.00	338,002,878.00

Expenses	N	Mean	Median	Total
Canadian Medical Schools	8	1,908,127.50	1,750,000.00	15,265,020.00
U.S. Medical Schools	33	2,119,370.88	650,000.00	69,939,239.00
U.S. Teaching Hospitals	78	2,312,836.73	960,000.00	180,401,265.00
All Types	119	2,231,979.19	920,498.00	265,605,524.00

Table 4 outlines the percentage of revenue by source. While some elements of revenue streams showed only slight year-to-year differences, some displayed significant overall changes, a possible result of the joint reporting of hospitals and medical schools and/or changing external regulatory pressures and revenue streams. Of the reported revenues, 31% arose from commercial support (markedly down from its height in 2008 at 54%); 26% derived from registration fees (down from roughly 45% in the 2010 survey); and advertising and exhibits at roughly 9% (unchanged for several years).

A total of 19% of academic CME units' funding arose from institutional funds (compared to 6% reported last year); this includes roughly 8% from the dean's office and 11% from the hospital or health system. Other funding streams were essentially unchanged. See Figures 11a and 11b for a breakdown of U.S. and Canadian data.

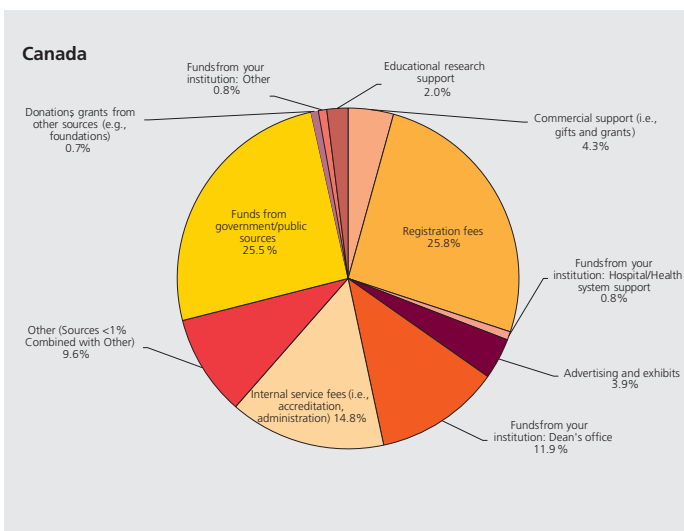
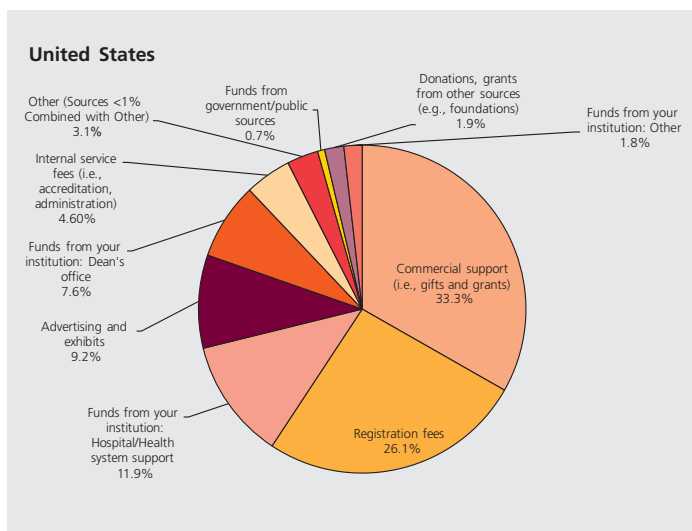
Table 4: Distribution of Revenue Sources (121 respondents)

Commercial support (i.e., gifts and grants)	31.4%
Registration fees	26.0%
Funds from your institution: Hospital/Health system support	11.2%
Advertising and exhibits	8.8%
Funds from your institution: Dean's office	7.9%
Internal service fees (i.e., accreditation, administration)	5.2%
Other (Sources <1% Combined with Other)	3.6%
Funds from government/public sources	2.3%
Donations, grants from other sources (e.g., foundations)	1.8%
Funds from your institution: Other	1.7%

The U.S./Canadian Revenue Picture

Funding models differ significantly among U.S. academic medical centers (medical schools and teaching hospitals) and Canadian schools. In general, although financial reporting mechanisms differ between the countries, much less commercial support is noted in reporting Canadian schools compared to their U.S. counterparts (4% versus 33%). Institutional support also varies: Canadian schools' CME units received nearly 12% of their support from deans' offices, compared to roughly 8% in U.S. institutions. In contrast, virtually no hospital or health system funding was reported from Canadian schools compared to just over 11% in the U.S. Compensating for this, Canadian school CME divisions reported approximately one quarter of their income from government or public sources; U.S. schools less than 1%. One area is roughly similar between the two countries; registration fees generated roughly one-fourth of revenues streams in both the U.S. and Canada. Compare figures 11a and 11b.

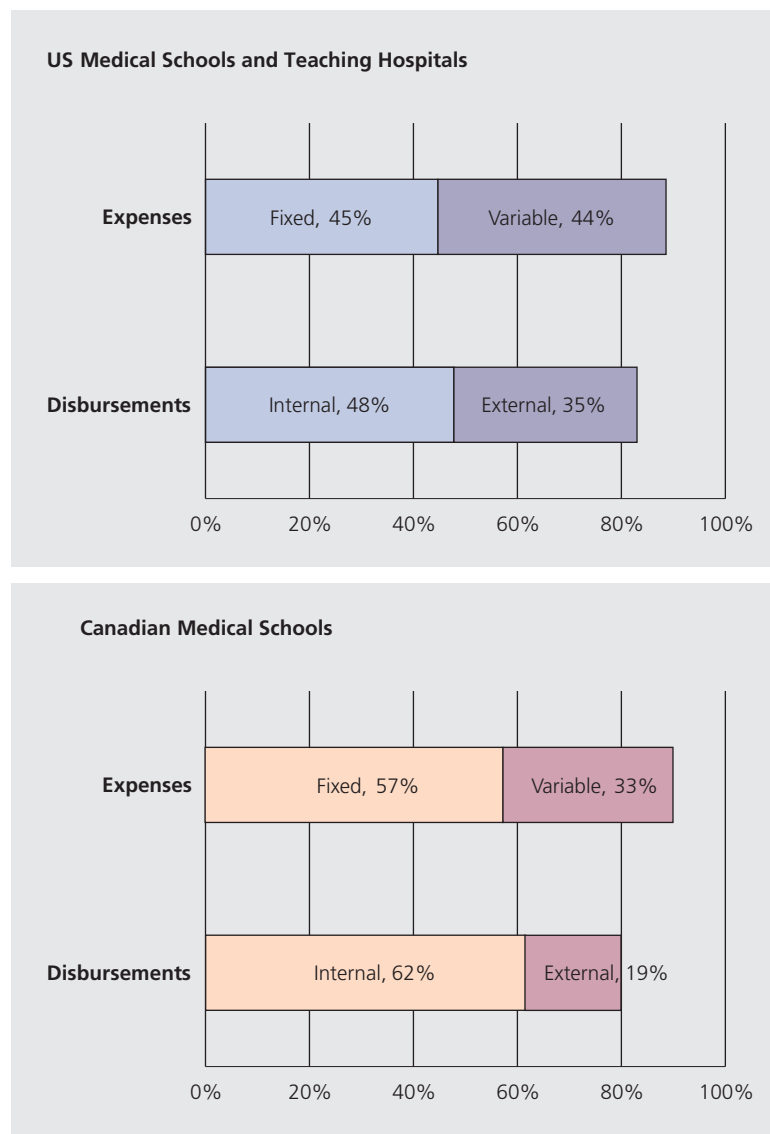
Figures 11a and 11b: Percentage of Revenue Sources of U.S. (113 respondents—both medical schools and teaching hospitals) and Canadian Medical School (8 respondents) CME Units



Academic CME Expenses and Disbursements

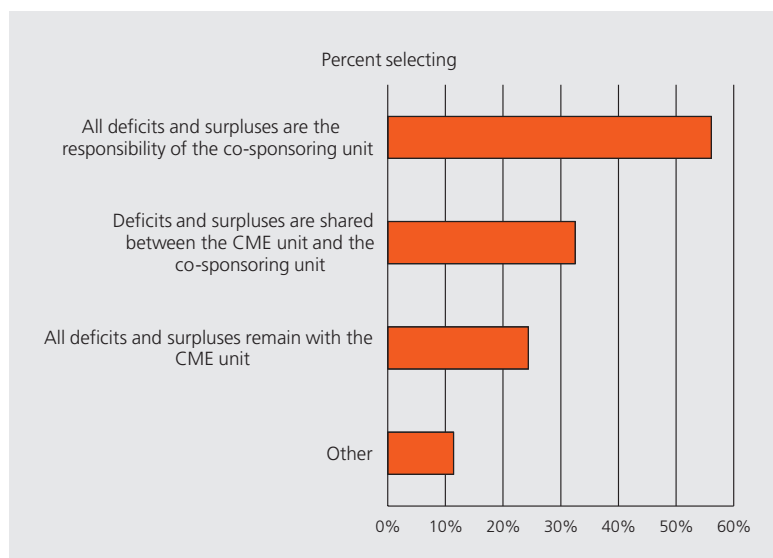
New in this year's survey, respondents were asked to report their expenses and the areas to which these were apportioned. In the U.S., 123 academic CME units responded, indicating an average (mean) expense of \$2.3M. Ten Canadian medical schools reported an average of \$1.9M in expenses. Fixed expenses (e.g., salary, IT support, rent) accounted for 45% of U.S. CME expenses, while 44% were variable (related to course or activity costs). In Canada, the proportion of fixed expenses at 57% outweighed that of variable expenses, at 33%. Similarly, disbursements demonstrated a different picture in both countries. U.S.-based units reported internal disbursements at 48%, related to contributions to departments, versus 35% external disbursements to external contractors or co-sponsors. In Canada, 62% of expenses were disbursed internally, 19% externally (Figure 12).

Figure 12: Expenses and Disbursements of U.S. (123 respondents) and Canadian (10 respondents) CME Units



Responding to the question of the manner in which internal disbursements were made, respondents were asked how the financial deficits and surpluses of their activity were allocated within their institution; 123 units replied. Just over one-half indicated that deficits and surpluses were the responsibility of the co-sponsoring unit, e.g., an academic department; while roughly one-third shared these in excess revenues or losses. Roughly one-fourth indicated that all revenues or losses stay with the CME unit, and a smaller percentage reported variations on this picture (Figure 13).

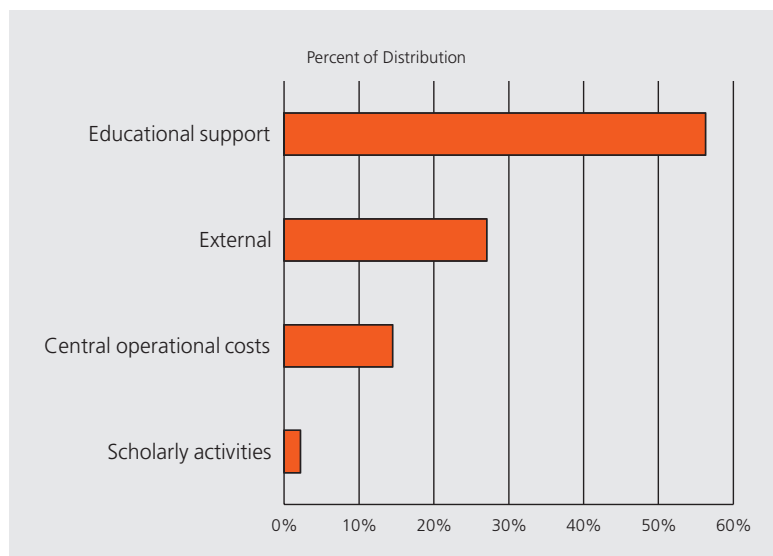
Figure 13: Allocation of Financial Deficits and Surpluses Between the CME Unit and Collaborating Departments/Units within AMCs (123 respondents)



The Uses of Commercial Support

112 units reported on the question of disbursement or use of commercial funding. 112 units responded from both countries and both medical school and hospital sites. Of the revenues received from commercial sources, 55% were applied to support educational activities; 26% were dispersed externally; 14% were applied to central operational costs, and less than 5% to research and related scholarly activities (Figure 14).

Figure 14: Commercial Support Revenue Distribution (112 respondents)



Section 6: Research, Development, and Best Practices in Academic CME

Respondents were asked to what extent they engaged in research activities described as formal evaluation processes related to physician or health professional learning, the effect of CME, outcomes derived from educational activities, and related matters. Some of these processes were externally funded, some internally. In the U.S., 116 institutions replied, of which 33 (roughly 30%) indicated some kind of research activity producing 50 new studies and engendering just over \$16M in grant support. Although much smaller figures were reported in Canada (\$828,080 in funding across ten centers), this represents 100% of the ten schools reporting, and 66 new studies (Table 5). These data compare favorably with data reported in the 2010 Harrison survey. While the number of schools reporting research activities overall and the number of studies undertaken remains stable, the funding has more than tripled—from \$5.3M in 2010 to \$17M this year.

Virtually all reporting Canadian academic CME units and roughly one-fourth of reporting U.S.-based units report research and development activities, totaling over \$15M in support and over a hundred studies. Best practices in educational planning, design, reach and scope, and in logistics and administration are widely reported.

Research Activity

Table 5: Research and Development Activities Reported by CME Units

Institution type	Number of units reporting CME and R&D (Respondents)	New CME-related research studies	Total dollar value of grants
U.S.	33 (116)	50	16,178,367
Canadian	10 (10)	66	828,080
All	43 (126)	116	17,006,447

Examples of Research Studies and Best Practices

Respondents were asked in an open-ended format to outline examples of research projects and provide examples of ‘best practices’, from an educational, outreach, or organizational nature. While there were clearly some differences in the scholarship and evaluative characteristics of these examples, there was sufficient overlap in their interest or topic areas. Similar to questions related to research and development, respondents were asked to briefly describe one or more ‘best practices’ in their CME programming. ‘Best practices’ included initiatives, programs, and projects that reflect best educational principles, address quality improvement or patient safety issues, or other innovations in CME and could include unique or effective organizational structures.

Given their large number, not all studies or best practices were listed; 14 institutions reported over 40 studies; 67 institutions reported literally dozens of best practices. These fall into several categories and are listed in tabular format online (www.aamc.org/initiatives/cme). The categories represented evaluations of innovations in educational formats (outreach activities, PI-CME or quality-improvement strategies, personal learning programs, faculty development, and others), knowledge translation or implementation science, new technologies (such as those leading to hybrid activities using live and on-line learning), new audiences (including allied health professionals, patients, and public members), planning strategies, and outcomes assessment methods. A host of administrative, financial, organizational, and collaborative activities were also described.

Discussion and Conclusions

This is the fourth iteration of the annual SACME/AAMC Harrison survey. It continues to demonstrate a viable and robust academic enterprise engaged in the ongoing education of practicing physicians and other health professionals and playing an increasingly important role in achieving the missions of the academic medical centers and medical schools of the U.S. and Canada.

Limitations

Any discussion of the results of the 2011 Harrison survey must stress its limitations. First, this document is the product of a self-reported survey, not subjected to audit or other external scrutiny. Second, the survey responses do not represent the entirety of the academic CME enterprise: roughly 40% of CME units did not respond to the survey. In particular, traditional or historically-defined teaching hospitals in the U.S., have not generally been the target of these surveys; not significantly aligned with the Society for Academic CME in the past, they represent a slightly under-reported group. Third, the decision to identify and segregate traditional ‘medical schools’ (not linked to hospitals in any logistical or organizational manner), while made to distinguish those with natural ties to the teaching hospital compared to those with none, reduced the numbers in this category and thus limited our ability to generate year-to-year comparisons. Further, between-year comparisons may be marred by a non-identical sampling of CME units.

Despite these limitations, we believe that the survey generates a useful list of findings for discussion and analysis, helpful in commenting on the size and scope of the academic CME enterprise, its current and possible future directions, and its role in the academic medical center and in improving patient care. Further, several trends are validated by a comparison with ACCME-reported data available at www.accme.org.

Academic CME: Effective Internal Alignment, Roles, and Organization

Perhaps the most striking finding of this year’s report—related to its more rigorous methodology and reporting structure—is the blurring of the distinction of the academic CME unit’s location as a relevant point of distinction. There appears to be a continuum of academic CME unit roles, reporting mechanisms, and responsibilities with linkages across the medical school, teaching hospital, and clinical settings—from those in traditional ‘medical school’ environments to those firmly imbedded in the teaching hospital without formal linkages to traditional medical school structures. Given the wide variety of reporting mechanisms displayed in this survey, these distinctions appear arbitrary at best, leaving the clear conclusion that there exists an entity—academic CME—with significant roles and demonstrated impact in the academic medical center.

There appears to be a continuum of academic CME unit roles, reporting mechanisms, and responsibilities with linkages across the medical school, teaching hospital, and other clinical settings—from those in traditional ‘medical school’ environments to those firmly imbedded in the teaching hospital without formal linkages to traditional medical school structures. These distinctions appear arbitrary at best, leaving the clear conclusion that there exists an entity—academic CME—with significant roles and demonstrated impact in the academic medical center.

In this picture, there is a clear trend towards alignment—at least among U.S. academic CME units—with organizational structures representing both the academic and clinical enterprises. This includes an increased focus on an internal audience (clinical faculty and other health professions) as represented by a growing percentage of such audiences at continuing education and professional development activities. There is also apparent a continued, well-developed relationship internally with CE programs for other health professions, GME, and, notably, a growing role in faculty development (in CME and clinical work, in UME and GME, and in regulatory aspects of research). Further representing the alignment with AMC missions, there is also a sizable emphasis on physician and quality improvement activities, and a clear trend towards an expanding interprofessional audience, representing teams and supporting interprofessional collaborative care. This alignment is supported by a growing mix of professionals represented by academic CME unit staff. Beyond those individuals skilled in event planning and logistics are those with responsibilities in educational planning and evaluation, information technology, and research.

The process of alignment and role-broadening is by no means complete or widespread, however; the process appears to neglect areas of possible interest to continuing education providers and the academic medical center—namely, building relationships with faculty practice plans, undergraduate medical education, hospital accreditation, and others. Further, few staff complements include individuals skilled in quality measurement or performance improvement. These reflect, at the very least, missed opportunities.

Community Engagement and Outreach

Despite this growing internal presence and alignment, the survey notes an equal commitment by the CME unit—at least on the part of some schools—to the regional community, represented by hospitals and community-based health professionals. This is reflected in strong relationships between academic medical center CME units and community hospitals or VA hospitals in the U.S., and in Canada with provincial licensing boards. This regional alignment appears important to considerations of ‘accountable care’ structures, in which community-based health professionals—and the linkage which academic CME represents to them—play a large and important role. In particular, the survey noted a large array of alternative educational formats such as teleconferencing, on-line learning activities, opinion leader and train-the-trainer programs, and the notable if still nascent use of social networking to link to community-based health professionals.

Funding

Also noted is a change in the funding pattern of academic CME units towards a more balanced and multi-source set of revenues. There appears to be, based on the results of this survey, a clear movement away from commercial support for academic CME towards one more dependent on a variety of revenue streams—grants (some of which appear to be industry funded) and institutional support—demonstrating the value of CME to an academic organization.

Research and Development; Best Practices

The survey notes a continued presence in research, evaluation, and best practices—a hallmark of academic CME. The research enterprise is more widely embraced among Canadian CME units, a product of former accreditation criteria and possibly closer linkages to medical school educational leadership. While less widespread, research in CME among U.S.-based units generated several millions of dollars in revenues for these units, and reflect a broad array of scholarly and innovative activities; a sizable portion of this research now arises from industry funding, reformulated from simple support to meet CME and system expectations regarding performance and health care outcomes and needs. Finally, best practices are widely reported—from those related to physician learning and change to those of a more organizational or technologic nature.

In conclusion, there are clearly strengths in academic CME units as presented in these data. Despite external pressures over the last several years, there exists a clear and impressive presence in the development and improvement of educational activities geared to practicing physicians and health professionals both internal to the academic medical center and external to it, and an impressive record developing scholarly activities and best practices. Challenges remain, however: creating more alignment between CME and other relevant units, the development of activities more related to PI and QI within the academic medical center, and fostering more alignment with others interested in community engagement.

Acknowledgments

The AAMC and SACME acknowledge the work of the survey writing group—Jack Kues, University of Cincinnati, chair; Lois Colburn, University of Nebraska; Michael Fordis, Baylor College of Medicine; Ginny Jacobs, University of Minnesota; and Ivan Silver, University of Toronto.

In addition SACME and AAMC wish to acknowledge the dedication of the AAMC staff to the production, delivery and data analysis involved in this survey. They include Carol Goddard, Jack Krakower, David Matthew, and Collins Mikesell, along with Nancy Davis, Kristen Chou, Nathan Johnson, and Shayla Woodson. Finally, the efforts of R. Van Harrison, Ph.D., University of Michigan, to build a database on which to compare years of activity and track changes within the academic CME community are remarkable and have provided a robust platform on which to build further analyses of the place and role of CME in education, research, and service in the academic medical center. This survey and its summary are a tribute to his energy and commitment to that process, and that of the Society for Academic Continuing Medical Education.

Dave Davis, M.D., F.C.F.P.
For the Survey Writing Group



**Association of
American Medical Colleges**

2450 N Street, N.W., Washington, D.C. 20037-1127

T 202 828 0400 **F** 202 828 1125

www.aamc.org