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Academic CME: The 2012 AAMC/SACME Harrison Survey

Five years of progress towards continuing education and improvement in the academic medical center

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Acknowledgments

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Academic CME: The 2012 AAMC/SACME Harrison Survey

Five years of progress towards continuing education and improvement in the academic medical center

Executive Summary

The fifth iteration of the annual AAMC/SACME Harrison Survey documents a highly viable and robust academic enterprise increasingly integrated into the functions and mission of the academic medical centers (AMCs) and medical schools of the U.S. and Canada.

While there are several limitations to interpretation of this survey, the survey generates broad but important findings for discussion and analysis, namely:

- An increasing linkage of the academic continuing medical education (CME) unit to the quality and performance improvement programs and initiatives of the hospital and health system. In particular, extensive interaction among these areas has grown from below 10 percent to more than 15 percent since 2008, and the relationship has become increasingly important over a five-year period.
- Continued well-developed relationships with programs for other health professions, graduate medical education (GME), and faculty development; however, missed opportunities for the academic CME unit and the AMC in building collaborations with faculty practice plans, undergraduate medical education, hospital accreditation, and other functions.
- A clear trend to assess outcomes beyond the scope of the traditional post-course 'happiness index' using a variety of methods to assess competence, performance, and patient outcomes to evaluate their impact on the health system.
- Growing institutional support, demonstrated by comparing median institutional support to full-budget figures, representing commitment on the part of most, if not all, institutions in support of academic CME.
- A widespread commitment to regional community-based hospitals, health systems, and health professionals, reflected in a growing array of educational methods, including academic detailing. This regional alignment is important to considerations of 'accountable care' structures.
- Increasing use of evidence-based educational methods that have been shown to more frequently change clinical performance over a five-year period.
- A reasonably steady, if still relatively small, cohort of CME units committed to scholarship that contribute to the research enterprise in health professional learning and change, the product of collaboration both within and across AMCs, derived from funding sources internal and external to the institution.

Thus, academic CME demonstrates, despite external financial and regulatory pressures (and perhaps because of them), several major changes over a five-year period. There is evidence of an increasing integration into the functions of the AMC; an uptake in the use of effective educational methods; a wide variety of outreach activities geared to the needs of the communities served by AMCs; and an impressive, if not yet widespread, record in scholarly activities and best practices.

Background and Methods

Background

This is the fifth annual survey sponsored jointly by the AAMC (Association of American Colleges) and the Society for Academic Continuing Medical Education (SACME) in collaboration with the Association of Faculties of Medicine of Canada (AFMC). It is based on previous surveys of academic CME providers conducted during the last two decades by SACME. Its name, "The Harrison Survey," recognizes R. Van Harrison, Ph.D., of the University of Michigan, who led the society's biannual CME survey efforts during this period.

The Harrison Survey reviews the organization of the CME unit in U.S. and Canadian medical schools and in the AAMC Council of Teaching Hospitals and Health Systems® (COTH)®. Additionally, the survey provides information on how CME units relate to the academic medical center (AMC) in which it resides, aspects of its 'product' (educational activities and interventions), some aspects of its funding base, and research and innovation.

In 2012, the survey was shortened to reduce the burden on members and eliminate data collected by other organizations, especially the Accreditation Council for Continuing Medical Education (ACCME). The fifth annual survey highlights change in response to external forces in CME and possibly the efforts of the AAMC to create an integrated, effective continuing education/professional development presence within the AMC.

Several reporting and naming conventions are used in the Harrison Survey. The term 'CME unit' refers to continuing medical education offices and programs and includes those units referred to as continuing professional development, lifelong learning and professional development, or continuing education and improvement, among other variations. AMC refers to the academic medical center, the amalgam of the teaching hospital and medical school in which context the academic CME unit plays a role. Canadian and U.S. dollar figures, roughly equivalent throughout 2011 and 2012, are not reported separately. Tables and figures indicate the numbers of units responding to specific questions. Finally, all percentages are rounded to the nearest full percentage point.

Methods

Questions from the 2011 survey were reviewed by the writing group named in this report that eliminated some questions already asked by the ACCME, and others considered less essential or unlikely to generate useful information on an annual basis. This process shortened the survey for most respondents by approximately 50 percent.

In June and July of 2012, an Internet search identified a total of 465 academic CME units that comprised 315 U.S. teaching hospitals, 17 Canadian medical schools, and 133 U.S. medical schools for whom a defined CME office and/or institutional contact information could be identified, and/or in which a central national or regional CME office did not accredit the activities (e.g., VA hospitals). This list was matched with that of the ACCME, where possible, to confirm contact names which, generally, are the

The 2012 Harrison Survey report focuses where possible on changes over a five-year period—especially in the areas of educational effectiveness and integration of academic CME units.

directors of CME. To accommodate for those instances in which a director's name could not be located, a telephone solicitation was undertaken to CME units and offices.

Regarding medical schools, only 45 academic CME units represented U.S. medical schools, while all 17 Canadian medical schools were represented by CME units. An additional 88 CME units in the U.S. indicated that they provided CME services to both their medical school and one or more teaching hospitals or health care systems, for a total of 150 such institutions.

Regarding teaching hospitals and health care systems, 56 units reported representing only their own institutions; while a further 33 units represented themselves and an additional 40 institutions.

In all, this generated a total of 239 academic CME units—17 Canadian medical schools, 133 U.S. medical schools, and 89 teaching hospitals/health care systems, with cross-representation as indicated above. See Table 1.

In late August, an email was sent to each director to confirm his or her role and to announce the upcoming survey. The survey was then open for a six-week period during which time three reminders were sent to nonresponders. The survey was closed in early October.

This report summarizes data from active, accredited CME units whose data were available at the time of reporting. Wherever possible, data are compared to previous surveys to mark possible trends. In particular, this report focuses on some changes over a five-year period, using the 2008 Harrison survey (with a response rate of 83%) to comment on degrees of integration, the use of effective educational methods, and other trends.

The 2012 Harrison Survey report describes:

- response rate and characteristics of the respondents
- mission and scope of activities of academic CME units
- organization of AMCs in relationship to their CME units
- use of effective CME methods
- funding issues in academic CME
- research, development, and best practices

Response Rate and Respondent Characteristics

Of the 239 eligible CME units in U.S. teaching hospitals and in U.S. and Canadian medical schools, 184 (77%) responded to the survey. Of these, roughly 94% were U.S.-based and 6% Canadian-based. One hundred twenty-seven (79% of all respondents) reported national accreditation in the U.S. by the ACCME and 22 (14%) by state accrediting agencies. All 12 reporting Canadian schools (6% of the total) indicated accreditation by the Committee on Accreditation of Canadian Medical Schools (CACMS). The response rates for three entities—Canadian medical schools, U.S. medical schools, and U.S. teaching hospitals or AMCs—are displayed in Table 1.

Table 1: Response Rate and Respondent Characteristics

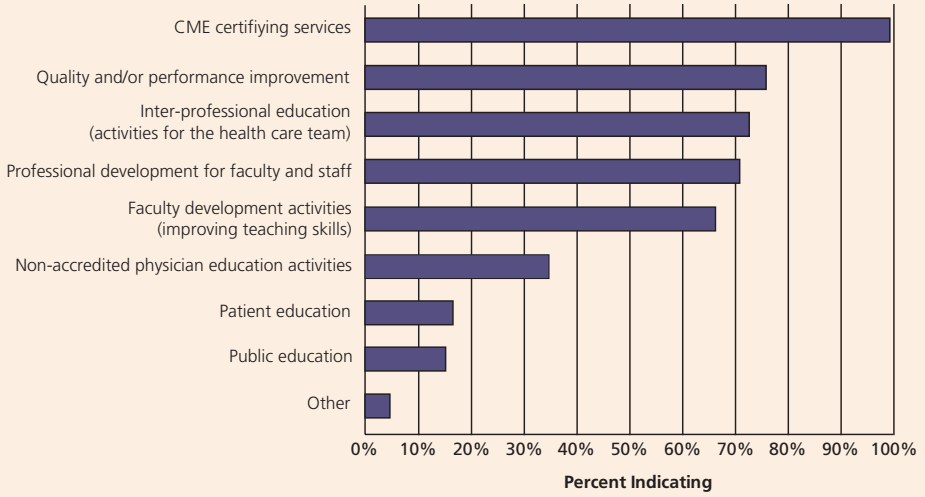
Institution Type	Total Invited	Total Responding	Percent Responding
Canadian Medical Schools	17	12	70.6%
U.S. Medical Schools	133	114	85.7%
Teaching Hospitals	89	58	65.2%
All Types	239	184	77.0%

The Mission and Structure of Academic CME Units

Roles and Scope of the CME Unit

CME units were asked to describe the scope of their mission and role. While most units provided certified CME services, 159 units responded to the question of other services provided. Roughly three-quarters (76%) of these sites provided quality and performance improvement activities, or planning and continuing education for an inter-professional audience. Similar percentages provided clinical professional development for faculty and staff and faculty development to improve teaching skills. Of interest, 35% provided at least a small number of noncertified educational services, and 15% 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 (Figure 1).

Figure 1: Roles and Scope of the Education Mission of CME Administrative Units (159 Respondents)



Staff Complement and Roles in the Academic CME Unit

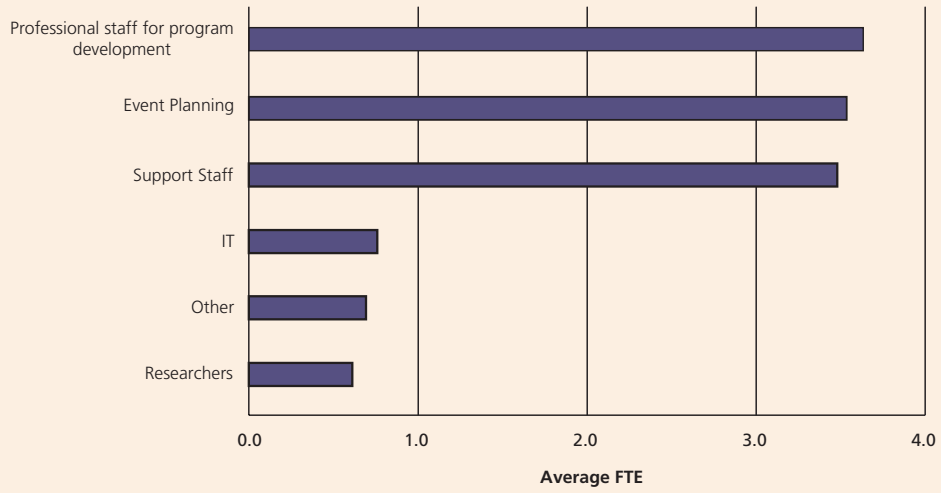
In addition to reporting of staff with responsibilities in educational development, event planning, support roles, and related functions, CME units also reported staff expertise in:

- Research and grant writing
- Accreditation and compliance
- Business analysis and operations
- Marketing and Communications
- Academic detailing
- Strategic affairs and planning

Respondents were asked to indicate the number of full time equivalent (FTE) staff (i.e., amount of time spent in an area multiplied by the number of staff members) within their units for each of the following areas: research, information technology, event planning, logistical support, and other roles. Not all units possessed all functions.

One hundred thirty-nine units reported staff members engaged in a wide variety of activities, ranging from program development and event planning to IT responsibilities, research, and grant writing. See Figure 2 and the text box for further detail.

Figure 2: Average CME Staffing Resources (FTE) by Staff Type (139 Respondents)



Organizing for Effect: Building Relationships within the Academic Medical Center

Developing activities to achieve the missions of the academic medical center (AMC) requires an understanding of the organizational and reporting structures of CME units in modern health care settings.

Internal Relationships

The relationships developed within the AMC foster the achievement of goals of the entire center and those of the academic CME unit. Respondents were provided a list of programs, departments, or units internal to the AMC which may exist in their respective settings. These 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.

Further, respondents were asked to describe the relationship between the CME office and each of those programs on a scale ranging from no or minimal interaction to extensive interaction. In this case, minimal interaction was described as "irregular or occasional activity linked to the program or unit," while extensive interaction was characterized as "ongoing planning or developmental activity, conjoint programming, shared goals and strategic directions, or shared resources."

Figure 3 conveys findings of only U.S. medical school CME units in order to compare year-to-year survey results. Several relationships are of interest when responses for 'extensive' and 'moderate' interaction are combined.

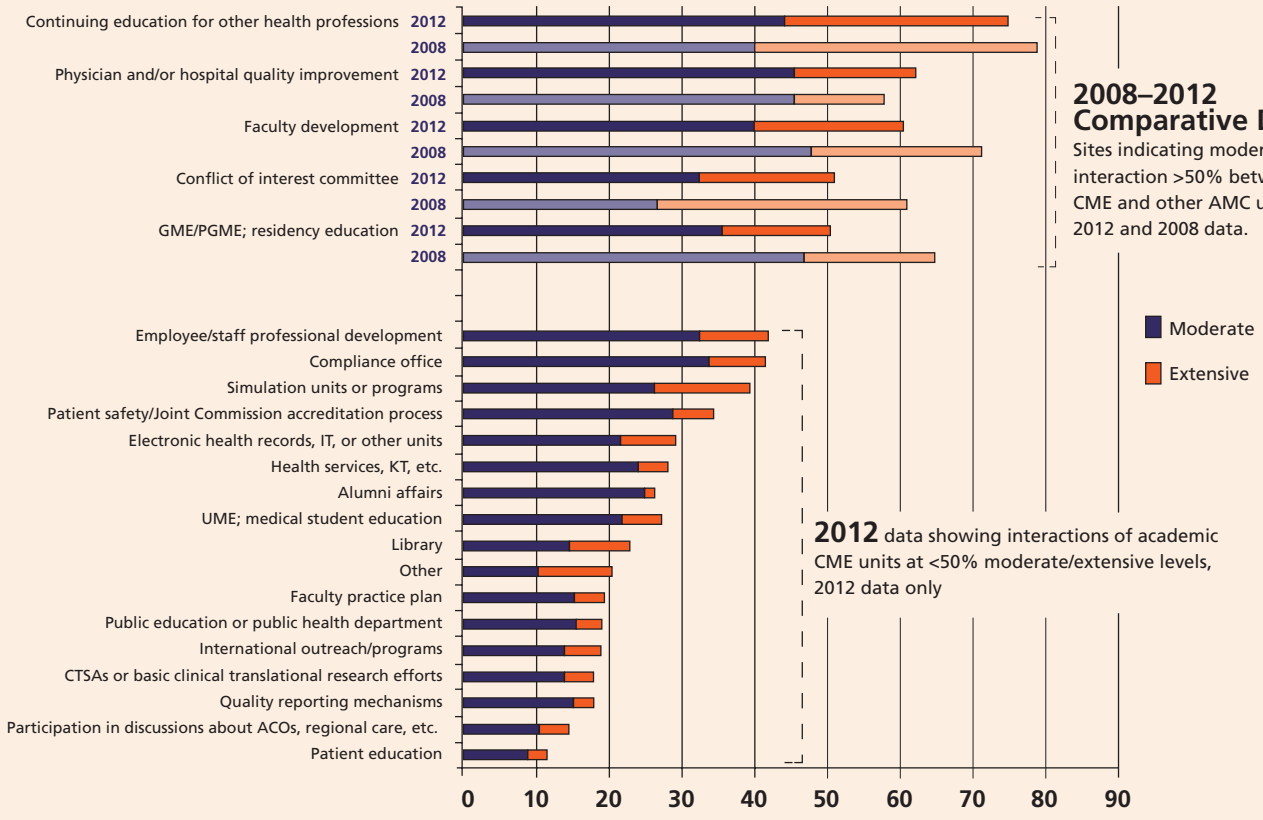
Of the 91 U.S. medical school-based units shown in Figure 3, 74% indicated a combined moderate/extensive interaction with continuing education programs for other health professions, 62% described similar interactions with physician or hospital quality improvement programs, and 61% expressed a combined moderate/extensive interaction with faculty development programs.

One area represents an important change in the degree of interaction over a five-year period. Previous Harrison Survey reports described relationships with QI/PI functions as fifth in frequency in 2008, with combined moderate to extensive interaction at roughly 58%. In the 2012 survey, relationships with QI/PI now place second among relationships. Further, the percentage of those selecting extensive interaction has also grown, accounting for virtually the entire growth in this area. From 2008 to 2012, the total of combined moderate/extensive interaction improved from 58% to 63%, the product of growth in the 'extensive interaction' category.

Also reported at levels of greater than 50% in this year's survey was involvement at moderate or extensive levels with conflict of interest committees, with graduate or residency medical education, and with the allied health professions. Several interactions were much less frequently reported, providing examples of opportunities for academic CME, and the AMC itself. See Figure 3.

Not shown in graphic form, the academic CME units in U.S. teaching hospital settings also demonstrated stronger relationships in CE for health professions and physician or performance improvement activities.

Figure 3: Intra-institutional CME Interactions



Better Methods, Better Outcomes: Incorporating Best Evidence into Academic CME

The 2012 Harrison Survey focuses on four aspects of programming that reflect a growing awareness of the literature driving changes in the delivery of continuing education and professional development activities, making them more effective in the process, namely:

- use of evidence-based methods in regular course planning, implementation, and follow-up
- use of assessment methods to determine the effect of these activities
- growing use of alternative methods and strategies to reach a diverse audience external to the AMC
- role of faculty development

Using Evidence-based Educational Methods: Better Education, Better Outcomes

Rigorous research evidence, including systematic reviews, demonstrates the positive effect on health professional performance when research-based educational methods are employed.[1] In particular; this research encourages CME providers to:

- Use objective data and understand barriers to change as they plan activities (e.g., employing quality data in planning and development).[2]
- Increase the use of interaction in planned educational sessions (e.g., by using case discussion methods or simulations, or by providing in-program practice aids such as flow charts).[3]
- Employ sequential learning so that practice and education are mutually reinforced.[4]

Since the first AAMC/SACME Harrison Survey in 2008, respondents have been asked about the use of these methods, along with other activities in pre-activity planning, course development, and post-course evaluation. These are summarized in Figure 4a and b.

Pre-activity Methods

Reported here are several pre-activity planning methods. Among them, planning based on quality metrics to augment subjective needs assessments appears to be an important, evidence-based step. Of the 145 reporting CME units, 80% indicated regular use and 19% reported occasional use of these methods. Forty-seven percent occasionally and 35% regularly have developed meaningful interprofessional planning methods, and 37% occasionally and 41% regularly consider barriers to changing professional performance. In contrast, only 40% of units occasionally or regularly undertake presenter training of professional development in order to train these presenters in more effective methodologies.

In-program Methods

Several evidence-based educational methods in courses and conferences themselves are also reported as occasionally or regularly used by academic CME providers. Chief among these was the use of 'interactivity,' defined as devoting more than a quarter of educational time to case discussion, audience interaction and participation, and/or question/answer sessions. The majority of CME units reported employing such methods to a significant extent (>25% of programming time), with 60% reporting interactive techniques and methods regularly.

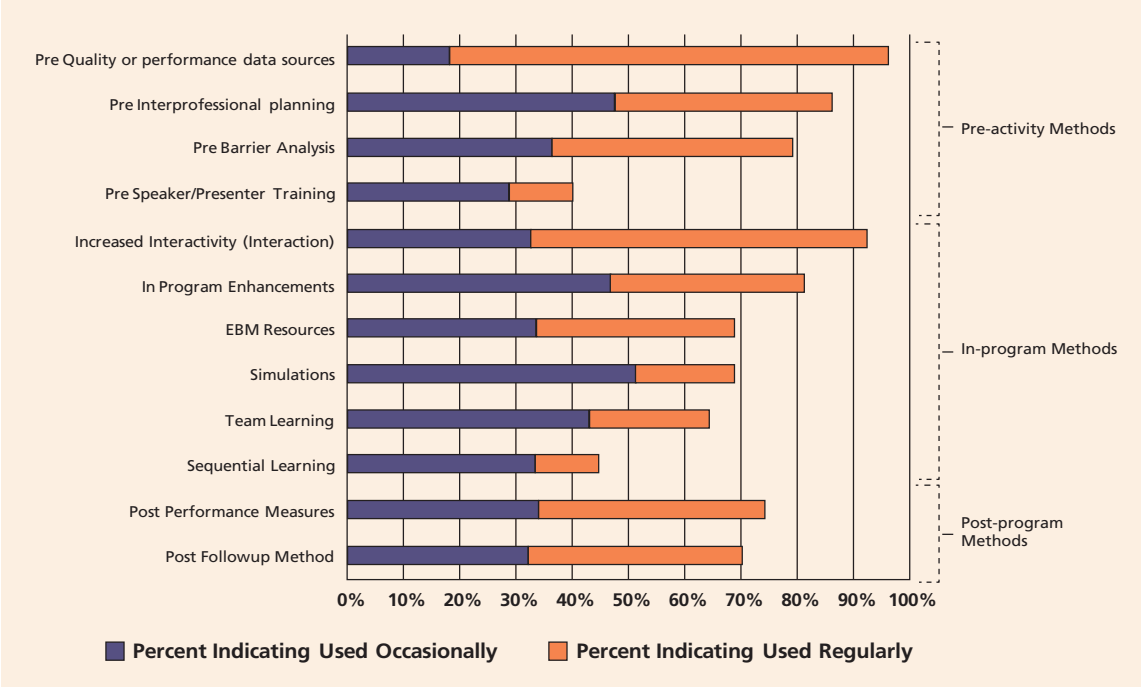
Academic CME providers report using evidence-based educational methods—objective needs assessments, teaching methods such as interactivity and simulations, and post-activity follow-up—to a significantly greater extent over a five-year period.

Other effective methods used regularly or occasionally included practice facilitators or enablers such as flow charts for use in the practice setting (81%), evidence-based tools and resources (69%), simulations (69%), and team-based learning (64%). Only 45% used methods described as sequential i.e., learning sessions separated by practice periods, in which new knowledge or skills can be acquired and then built upon in further educational sessions.

Post-program Methods

Respondents were asked about the use of quality metrics to assess the impact of their programs: 75% did so either regularly or occasionally. In addition, adopting the research evidence that reinforcing strategies enabled the uptake of knowledge and practice change, respondents were asked if they followed up with their program participants post-course—emailing new information, reinforcing commitments to change, asking further questions—and 70 % reported doing so, more than half regularly. See Figure 4a.

Figure 4a: Use of Evidence-based Educational Methods; 2012 data (145 Respondents)

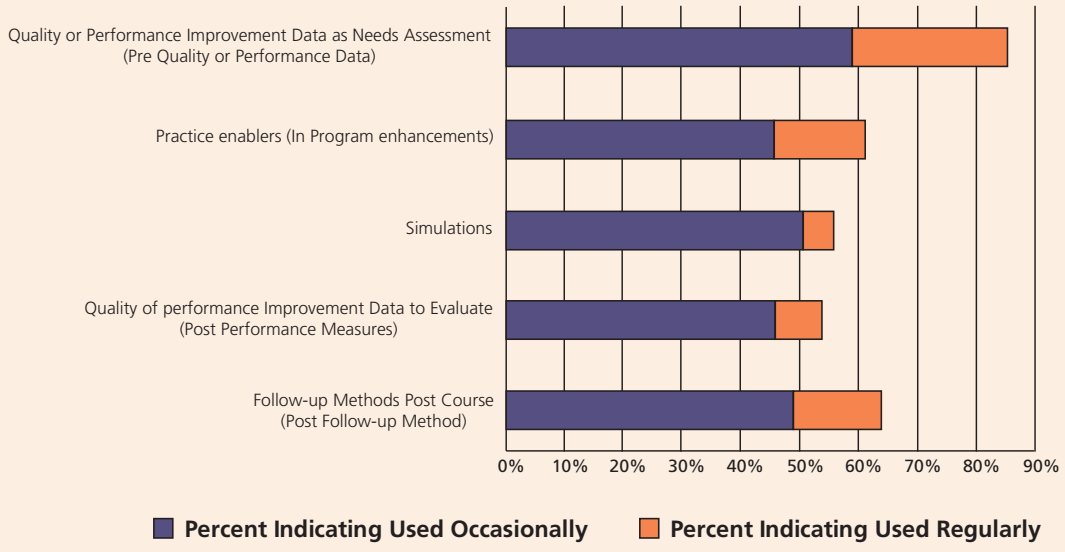


Five-Year Comparisons

Comparison with the first (2008) AAMC/SACME Harrison Survey report provides an instructive means to judge progress in academic CME. Several items have been tracked annually or semi-annually since the publication of that report; the 2012 Harrison Survey report demonstrates a progressive change towards the current picture. 2008 data is presented below in Figure 4b, in particular demonstrating:

- the use of quality or performance improvement as needs assessment occasionally or regularly (85%)
- in-program practice enablers (61%)
- simulations (56%)
- post-performance quality measures to track the outcomes of educational activities (54%)
- follow-up methods to reinforce participant learning (64%)

Figure 4b: Use of Evidence-based Educational Methods; 2008 Data



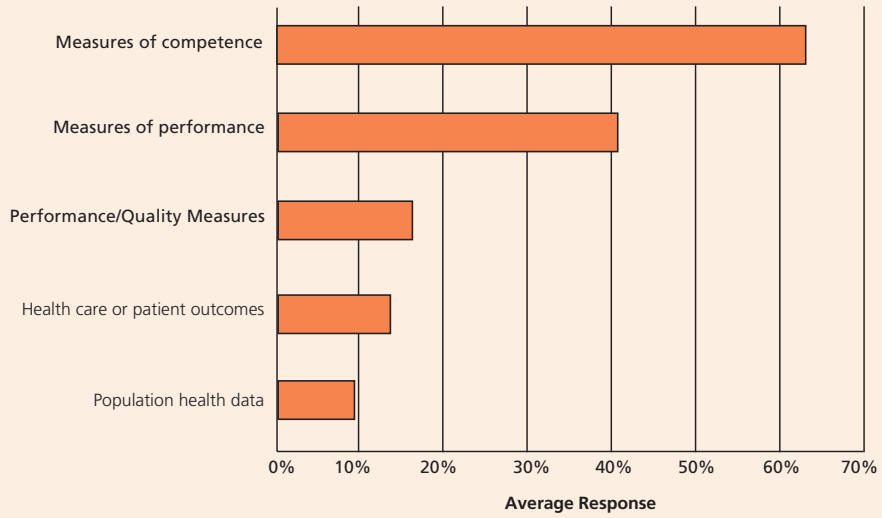
Post-activity Assessment

Beyond the post course 'happiness index', many academic CME providers use measures of competence, self-reported or actual performance data, and (a smaller number) patient and population health data.

Accreditation requirements, a growing emphasis on accountability and assessment, and the AAMC's own efforts in this area have encouraged academic CME providers to track the outcomes of their educational activities by more than the traditional 'happiness index.' New to the 2012 survey, respondents were asked to indicate what percentage of activities used the outcomes measured presented in Figure 5.

Sixty-three percent of respondents' activities involved measures of competence (e.g., post-course multiple choice examinations), 40% employed general, self-reported performance measures,16% used objective data such as quality measures to track outcomes, while smaller percentages (13% and 9% respectively) measured actual patient or population health outcomes. See Figure 5.

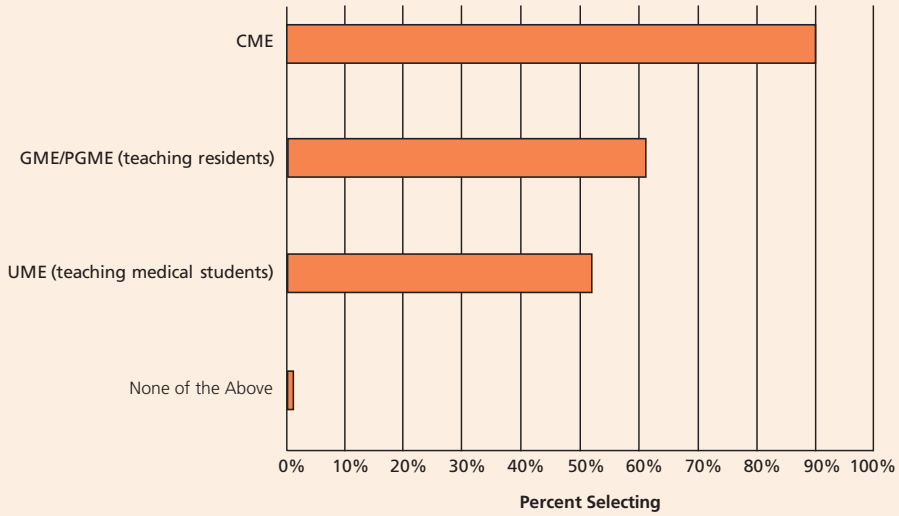
Figure 5: Outcome Assessments by Academic CME Activities (138 Respondents)



Serving Faculty Development Needs

When asked the question, "Does your CME unit participate in faculty development activities," 119 units, or 84%, indicated 'yes'. The majority of these activities involved educational or accreditation aspects of faculty development that touched upon the teaching methods in UME, GME, and CME. One hundred and eight (91%) had responsibilities of some type for CME teaching, 73 (61%) for GME (or in Canada PGME) teaching, and 62 (52%) for UME teaching improvements. See Figure 6. This percentage of activity has remained relatively stable over several years.

Figure 6: CME Units Involved in Faculty Development Activities across the Medical Education Continuum (119 Respondents, Respondents could select multiple responses)



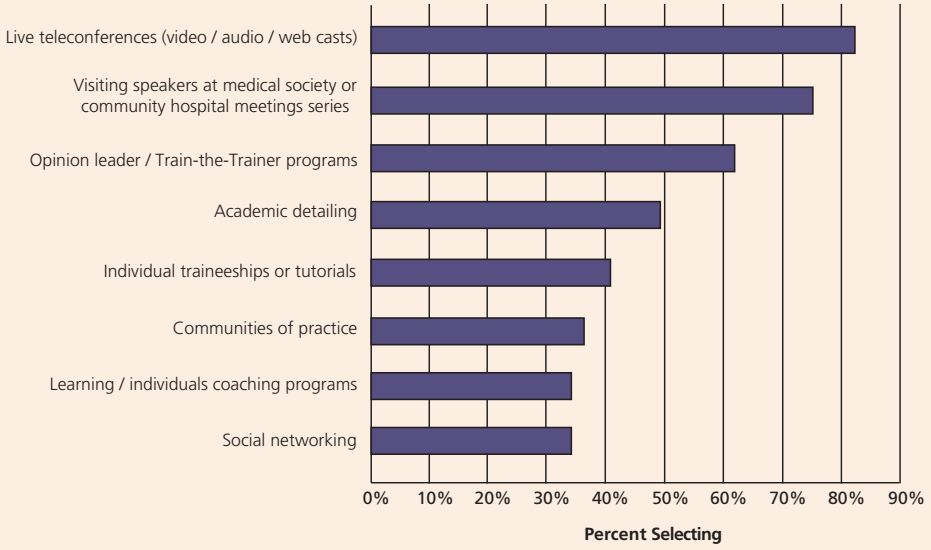
One hundred and four CME units also reported some responsibility for faculty development activities involving basic research, regulatory matters, or clinical issues. Ninety-six units (92%) developed faculty-focused activities in clinical issues such as team training or quality improvement, and 60 units (58%) in the area of basic research (e.g., regulatory, conflict of interest, or ethical issues).

Reaching Out: Serving the Regional Community

In addition to providing traditional courses and conferences, academic CME providers also reach out to regional community-based practitioners. Respondents reported using live teleconferencing (audio or video) methods, visiting speakers' programs, opinion leader, and train-the-trainer activities, academic detailing, social networking, and other means. See Figure 7.

Regional health professionals and systems are also served by academic CME providers, using teleconferencing, opinion leader and train-the-trainer programs, and (to a lesser but growing extent) social networking methods. Academic detailing—outreach visits by trained health professional—appears to have undergone substantial growth over a five year period.

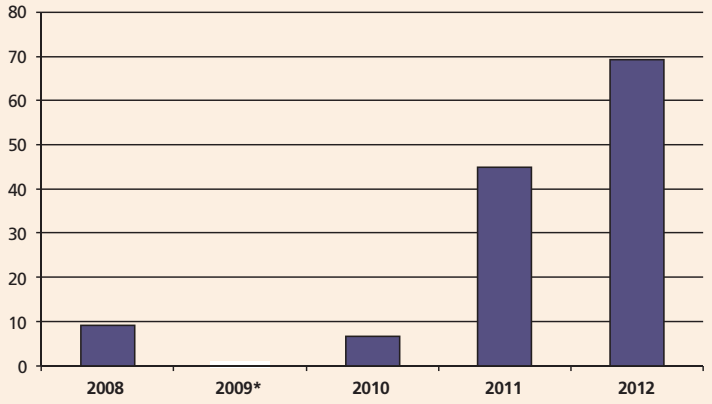
Figure 7: Outreach Activities of Academic CME Providers (140 Respondents)



Academic Detailing

Fifty percent of CME units reported the use of academic detailing—educational visits by trained health professionals to individual or team-based physicians. This method has been demonstrated to improve prescribing and health promotion/screening performance to at least a moderate extent.[5] Academic CME units have reported a steady rise in the numbers of such programs. See Figure 8.

Figure 8: Academic Detailing over a Five-Year Period as Reported by Academic CME Units



*Data regarding Academic Detailing was not solicited in 2009.

The Funding of Academic CME

Recognizing that the ACCME data reflect current replicable data about CME, the 2012 Harrison Survey analyzes relevant funding structures. The report focuses on the overall fixed operating budget of the CME unit and its support from institutional sources.

Academic CME Budgets

For calendar year 2011, CME units were asked about the size of their total fixed operating budgets, reflecting a wide spread of means, medians, and budget ranges by institution type. Less variability was noted among the eight reporting Canadian medical schools, which indicated budgets with the following characteristics: a median of $1.3 million, a maximum of $4.5 million, and a minimum of $364,000.

In contrast, the 90 U.S. medical schools reported lower median budget figures (by roughly $500,000), but greater variability ($11.8 million in maximum, $25,000 in minimum). Even more variability was noted among U.S. teaching hospitals. Twenty such units reported median figures of $275,000, indicating a maximum of $30 million and a minimum of $5,000. See Table 2.

Table 2: Total Budget and Institutional Support for Academic CME Units by Type of Unit

Total CME Fixed Operating Budget, by Institution Type (N=127)

Institution Type	Canadian Medical School	U.S. Medical School	Teaching Hospital
Number of respondents	8	90	29
Mean budget	$1,798,132	$797,097	$2,126,509
Median budget	$1,321,497	$497,506	$275,000
Maximum budget	$4,500,000	$11,800,000	$30,000,000
Minimum budget	$364,400	$25,000	$5,000

Total Revenue from Institution to CME Unit, by Institution Type (N=128)

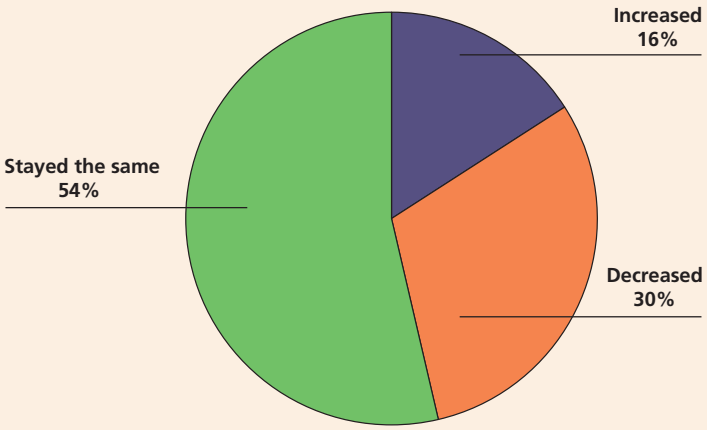
Institution Type	Canadian Medical School	U.S. Medical School	Teaching Hospital
Number of respondents	8	91	29
Mean revenue	$446,453	$235,356	$1,307,074
Median revenue	$396,121	$141,461	$200,000
Maximum revenue	$1,253,000	$3,000,000	$30,000,000
Minimum revenue	$50,000	$0	$0

Revenue from Institutional Sources

Table 2 also outlines the percentage of revenue from institutional sources such as deans, chief academic officers, or other AMC support. Among Canadian medical schools with median budgets averaging $1.3 million, just under $400,000 (roughly one-third) come from institutional sources. U.S. medical schools reported slightly less than $500,000 in median total revenues (though a wide range) and $141,000 in median institutional support (slightly under one-third). Finally, U.S. teaching hospitals reported $275,000 in median income, of which $200,000 was derived from institutional (hospital and health system) sources—roughly 80%.

While questions about the degree of institutional support have been asked in previous years, this year's question—total budget figures and the manner in which the percentage of such support was calculated—permits no year-to-year comparison. Instead, the 2012 survey asked the question, "As a percentage of the fixed CME budget, has institutional support increased, decreased, or stayed the same in the last year?" More than half (54%) of respondents indicated similar year-to-year support, 16% indicated an increase in support, and 30% a decrease. See Figure 9.

Figure 9: Percentage of the Fixed CME Budget Institutional Support Compared to Previous Year (138 Respondents) as Perceived by Respondents



How Academic is 'Academic' CME? Research, Development, and Best Practices among CME Units

Research Activity

Respondents were asked to what extent they engaged in research activities. These were described as formal evaluation processes related to physician or health professional learning, the effect of CME, the outcomes derived from educational activities, and related matters. Some research was externally funded by peer review or commercial sources, and some internally funded.

Research activity is reported by a sizable minority of academic units, primarily in medical schools—totaling millions of dollars and over two hundred studies.

In the U.S. and Canada, 43 units reported research activity. These units undertook a median of two research studies and, for the roughly half that declared any financial support, a median of $70,000 income. Mean, maximum, and minimum numbers of studies and financial support can be seen in Table 3.

Table 3: Research and Development Activities Reported by CME Units

New CME-related research studies by institution (N=43)

Number of respondents with studies	43
Maximum reported number of studies	100
Minimum reported number of studies	1
Mean reported number of studies	5.7
Median reported number of studies	2

Grant support for the CME-related research studies (N=42)

Number reporting no grant support	20
Number reporting support >$0	22
Maximum reported grant dollars for those with support	$9,911,316
Minimum reported grant dollars for those with support	$20,000
Mean reported grant dollars for those with support	$924,337
Median reported grant dollars for those with support	$70,000

Collaboration Within and Across CME Units

Those units reporting research activity were then asked to what extent these studies were either cross-institutional or collaborative within the institution and/or multi-institutional. The majority of respondents reported undertaking both cross- and multi-institutional studies. See Table 4.

Table 4: CME Engagement in Intra- and Extra-institutional Research (N=60)

	Yes	No	Total
Cross-institutional or collaborative research within own institution	51	8	59
	86.4%	13.6%	100.0%
Multi-institutional or collaborative research, e.g., with other medical institutions	33	24	57
	57.9%	42.1%	100.0%

Examples of Research Studies and Best Practices

Respondents were asked in an open-ended format to outline examples of research projects in CME and related areas to provide examples of best practices from an educational, outreach, and organizational nature. Hundreds of projects, studies, best practices, and innovations were reported and are listed in tabular format online (www.aamc.org/initiatives/cei). They represent studies of innovations in educational formats such as: 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 in social networking or blended learning; new audiences including allied health professionals, patients, and public members; planning and assessment strategies; and outcomes assessment methods. A host of administrative, financial, organizational, and collaborative activities were also described.

Discussion and Conclusions

The fifth annual Harrison Survey documents a robust academic enterprise engaged in the ongoing education of practicing physicians and other health professionals as well as increasing integration into the functions and mission of the AMCs and medical schools in the U.S. and Canada.

Limitations

There are several limitations to the interpretation of this survey. First, the survey is based on a self-reported questionnaire to which 77% of academic CME units responded. Thus, responses are absent from one-quarter to one-third of academic CME units. Notably, traditionally defined teaching hospitals in the U.S. have not generally been the target of these surveys and are not, as a rule, members of the major co-sponsor of this survey—the Society for Academic Continuing Medical Education. Further, between-year comparisons may be marred by a sampling of nonidentical CME units and by questions which have been worded slightly differently, the result of an ongoing process to improve the clarity of the questions asked. Finally, the wide variation in reporting of some figures (e.g., those related to the budget) makes judgment difficult and casts some doubt on respondents' understanding of specific questions; median figures were used in this regard.

Despite these limitations, we believe that the survey generates broad but important findings for discussion and analysis that are helpful in commenting on the size and scope of the academic CME enterprise, its current and possible future directions, its role in the AMC and—most importantly—in improving patient care. Further, several trends are validated by a comparison with ACCME-reported data available at www.accme.org, by comparisons with the 2008 Harrison survey[6] and anecdotally by telephone interviews with selected academic CME providers.

Academic CME: Internal Alignment and Value

The first notable feature of this year's report, when compared to similar surveys over a five-year period, is the increasing linkage of the academic CME unit to the quality and performance improvement programs and initiatives of the hospital and health system. In particular, extensive interaction has grown from below 10% to more than 15% since 2008, and the relationship moved from fifth to second place during this time. Also apparent is a well-developed relationship internally with CE programs for other health professions, with GME, and, notably, with faculty development. These linkages across the medical school, teaching hospital, and clinical settings appear to make the traditional teaching hospital and medical school structures arbitrary at best, leaving the clear conclusion that there exists an entity—academic CME—with significant roles and demonstrated impact within the AMC. This integration is represented in Figure 10.

The process of alignment, however, is not universal across sites and systems and appears to neglect areas of possible interest to continuing education providers and the AMC—namely building relationships with faculty practice plans, undergraduate medical education, hospital accreditation, and other functions. Further, staffing of academic CME units rarely includes individuals skilled in such areas as quality measurement or performance improvement. At a minimum, these observations identify missed opportunities.

This trend to assess outcomes beyond the scope of the traditional post-course 'happiness index' is another indication of the growing integration and attention to educational outcomes. Here, academic CME providers appear to use a variety of methods to assess competence, performance, and even patient outcomes to evaluate their impact on the health system. A further, if arguable, means of assessing the degree of integration of academic CME into the mission of the AMC, is to judge the extent of funding support from institutional sources. This, at least by comparing median institutional support to full-budget figures, notes a sizable commitment on the part of most, if not all, institutions that support academic CME.

Figure 10: 'Working Parts' of the AMC and the Potential Interactions of the Academic CME Unit

Research, Scholarship, and Evidence-based Education: How Academic is 'Academic' CME?

In addition to its integration into the functions of the AMC, this survey also reflects other features related to its academic nature—an apparent attention to evidence and a commitment to its generation.

First, and most notably, academic CME programmatic commitment appears to be more evidence-based over a five-year period, i.e., employing educational methods that have been demonstrated to more frequently change clinical performance. These methods include pre-activity planning (e.g., using quality metrics as an objective means to determine performance), intraprogram activities (sequencing of learning activities, creating interactivity, and using enabling materials such as flow sheets and patient educational materials to support change in the clinical setting), and post-course methods to reinforce learning. The growth in use of these methods over a five-year period is notable.

This shift from traditional, didactic, and, thus, marginally effective CME, reflects more than just a contemporary trend. Instead, it demonstrates—much as the practices of academic physicians do—the uptake of best evidence with regards to practice. In this case, the practice is educational and reflects the undertaking of scholarship, research, and study, to analyze the effect of educational interventions, to test new ones, and to study their outcomes.

Second, it appears that there is a reasonably steady, if still relatively small, cohort of CME units which are committed to scholarship and which contribute to the research enterprise in health professional learning and change. This commitment is the product of collaboration both within and across AMCs, and is derived from funding sources internal and external to the institution.

Community Engagement and Outreach

The 2012 Harrison Survey also makes apparent a strong commitment, equal to its internal integration, to regional community-based hospitals, health systems, and health professionals. This is reflected in a growing array of educational methods such as teleconferencing, online learning activities, opinion leader and train-the-trainer programs, and the growing use of social networking to link to community-based health professionals. In addition, the growth of academic detailing during this time further shows CME providers' innovation and attention to effective educational engagement and an awareness of external funding opportunities in this area.

Finally, this regional alignment is important to considerations of accountable-care structures in which community-based health professionals—and the linkage that academic CME represents to them—play a large and important role.

Conclusion

Academic CME demonstrates, despite external financial and regulatory pressures (and perhaps because of them), several major features: evidence of an increasing *integration* into the functions of the AMC; an uptake in the use of *effective educational methods;* a wide variety of *outreach activities* geared to the needs of the communities served by AMCs; and an impressive, if not yet widespread record in *scholarly activities and best practices.*

Challenges are also presented in this report. Academic CME providers, AMC leadership and faculty need to create significant, functional alignments among CME and other relevant internal units, and enhance community engagement strategies and methods. Support for and an understanding of the potential role of academic CME units in scholarship in improving patient care and in achieving other missions of the AMC remain incomplete and patchy.

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