



*Continuing Medical
Education*

Designing and Implementing a Needs-Based Continuing Medical Education Activity

*A Resource Guide for Activity Directors,
Faculty and Department CME Staff*

Academic Affairs
Office of Continuing Medical Education
January 2011

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Introduction

The purpose of this Resource Guide (herein referred to as "the Guide") is to inform and further educate activity directors, faculty and department staff regarding the processes, policies and procedures essential to assure the development of a successful and fully compliant continuing medical education activity. The Guide suggests an approach to planning an activity that is based on adult learning principles and encourages activity directors to consider innovative educational formats and evaluation methodologies. Throughout this process, the staff of the Office of Continuing Medical Education (OCME) is available to assist you.

The Institute of Medicine Core Competencies for Physicians

CME remains an essential avenue through which practicing physicians obtain current information on advances in disease research and patient care. The Institute of Medicine (IOM) found that as many as 98,000 patients die annually as the result of preventable medical errors. Since the IOM published its report, *Crossing the Quality Chasm: A New Health System for the 21st Century*, the medical community has recognized that five core competencies for physicians must be integrated into daily practice and the medical education process:

- Provide patient-centered care
- Work in interdisciplinary teams
- Employ evidence-based practice
- Apply quality improvement techniques
- Utilize informatics

In addition, the American Board of Medical Specialties (ABMS) and the Accreditation Council for Graduate Medical Education (ACGME) embrace physician core competencies for training and recertification purposes. They are:

- Patient care
- Medical knowledge
- Practice based learning and improvement
- Interpersonal and communication skills
- Professionalism
- Systems-based practice

Activity directors today are challenged to create CME activities that address and promote these core competencies.

Definition of a Planned CME Activity

A CME activity may be designated for AMA-PRA Category 1 Credit™ if it is sponsored by an institution or organization accredited by ACCME (or an ACCME-recognized state accreditor) and if the activity meets certain criteria promulgated by the ACCME, among which are:

1. The activity is based on identified professional practice gaps and the educational needs that underlie the gaps.
2. The activity is designed to change learner competence and/or performance and/or improve patient health outcomes.
3. The scope of practice of the target audience is defined.
4. The activity is designed to meet identified physician competencies.
5. The format of the activity and the teaching/learning methodologies and techniques are appropriate to meeting the activity objectives and achieving the desired change.
6. Evaluation mechanisms are designed to assess changes in learners' competence and/or performance and/or changes in patient outcomes achieved as a result of the activity.
7. There is documentation of physician's attendance at the activity by the sponsoring institution or organization.
8. The activity complies with ACCME's Standards for Commercial Support.

Resources on Physician Core Competencies and Life Long Learning

Institute of Medicine - www.iom.edu/cms/3S09/4634/5914.aspx

ACGME - www.acgme.org

ABMS - www.abms.org

ACCME - www.accme.org

Ten Steps to Planning and Implementing a CME Activity

Step 1: Assessing the Need for an Educational Intervention

A continuing medical education (CME) activity or intervention develops from an idea based on identified professional practice gaps and the educational needs underlying those gaps. In a nutshell, there is a gap in practice behavior between the current state and the ideal state. There may be many reasons the gap exists but CME is concerned with those educational needs that may help cause the gap, whether it is knowledge (possession of the relevant information), competence (ability to do something, intention to implement practice strategies), or performance (actual implementation in practice), the CME activity or intervention is designed to address those needs, and thereby help close the gap.

Step 2: Develop an Activity Plan

- A. Appoint a planning committee**
- B. Identify specific educational needs**
- C. Articulate a statement of purpose**
- D. Develop objectives and content**
- E. Choose the best learning format(s)**

A. Appoint a Planning Committee

Planning a CME activity is hard work and should not be planned in isolation. Developing a curriculum requires broad input from a variety of faculty and staff experts. It is best to appoint a small but engaged planning committee to assist the activity director in this process to ensure the best possible outcome. A planning committee should include:

- Activity director
- Departmental CME coordinator
- CME office staff
- Department faculty/private attending physicians
- Other clinician experts
- A resident/fellow in training
- An expert in quality assurance/performance improvement methods

The charge of the activity planning committee is to assist the activity director in conducting a needs assessment (mechanisms for identification of professional practice gaps and educational needs); determine a target audience; identify topics and a learning format(s); identify and recruit internal and external faculty; provide input on overall educational goals; draft specific learning objectives; and design an evaluation method, including pre- and post-activity evaluations.

B. Identify specific educational needs

Educational needs can be derived from a number of different sources:

1. Inferred needs may be derived from the following:

- New methods of diagnosis or treatment
- Availability of new medication(s) or indication(s)
- Development of new technology
- Input from experts regarding advances in medical knowledge
- Acquisition of new facilities or equipment
- Legislative, regulatory, or organizational changes affecting patient care

2. Verbalized needs may be derived from the following:

- Subjects submitted on participants' activity evaluation forms
- Formal surveys of potential participants (mail and Internet-based)
- Informal comments
- Patient problem inventories compiled by potential participants
- Consensus of faculty members within a department or service area

3. Proven needs based on objective external data sources. These needs may be derived from the following:

- Epidemiological data
- Quality assurance/audit data
- Re-credential review
- Morbidity/mortality
- Infection control data
- Surgical procedures data
- Professional society requirements
- Residency training and competency requirements
- Journal articles/literature citations
- News media

Resources on Needs Assessment

www.bmj.com/cgi/ccntent/full/32417330/156

- Aherne M, Lamble W, Davis P. "Continuing medical education, needs assessment, and program development: Theoretical constructs." *Journal of Continuing Education in the Health Professions* 2001;21(1):6-14. Abstract.
- Bitterman JE. "Using qualitative research methods: moving beyond felt needs in CME design and delivery." *Journal of Continuing Education in the Health Professions* 1999; 19:25-33. Abstract
- Campbell C, Gondocz T. "Identifying the needs of the individual learner. In: The Continuing Professional Development of Physicians: From Research to Practice." Davis D, Barnes BE, Fox R (eds). Chicago: *American Medical Association*, 2003.
- Crandall SJ, "Using interviews as a needs assessment tool." *Journal of Continuing Education in the Health Professions* 1998; 18:155-162. Abstract.
- Daley BJ, Wilson SA. "Needs assessment in long-term care facilities: linking research and continuing education." *Journal of Continuing Education in the Health Professions* 1999; 19:111-121. Abstract
- Geluga MH, Sandlow LJ. "Use of focus groups for identifying specialty needs of primary care physicians." *Journal of Continuing Education in the Health Professions* 1998; 18:244-250. Abstract.
- Grant J. "Learning needs assessment: assessing the need." *British Medical Journal* 2002; 324(7330):156-159. Full-Text.
- Green JS, Leist JC. Determining needs from the perspective of institutions or organizations providing care In: The Continuing Professional Development of Physicians: From Research to Practice.' Davis D, Barnes BE, Fox R (eds). Chicago: *American Medical Association*, 2003.
- Hatch TF, Pearson TG. "Using environmental scans in educational needs assessment." *Journal of Continuing Education in the Health Professions* 1998; 18:179-184. Abstract.
- Jennett PA, Affleck L. Chart audit and chart stimulated recall as methods of needs assessment in continuing professional health education.' *Journal of Continuing Education in the Health Professions* 1998;18:163-171. Abstract.
- Lockyer J. "Performance of health professionals to determine priorities and shape interventions. In: The Continuing Professional Development of Physicians: From Research to Practice." Davis D, Barnes BE, Fox R (eds). Chicago; *American Medical Association*, 2003.
- Lockyer J, Ward R, Toews J. "Twelve tips for effective short course design." *Medical Teacher* 2005; 27(5):392-395.
- Mann KV. "Not another survey! Using questionnaires effectively in needs assessment." *Journal of Continuing Education in the Health Professions* 1998; 18:142-149. Abstract.
- McLeod PJ, Steinert Y, Conochie L, Nasmith L. "A faculty-development needs assessment at one medical school." *Academic Medicine* 1997; 72:558-559.
- Moore DEJ. "Needs assessment in the new health care environment combining discrepancy analysis and outcomes to create more effective CME." *Journal of Continuing Education in the Health Professions* 1998; 18:133-141. Abstract.
- Murie J, Hanlon P, McEwan J, Moir D, Gregan J. "Needs assessment in primary care: General practitioners' perceptions and implications for the future." *British Journal of General Practice* 2000; 50(450):17-20. Abstract.
- Norman GR, Shannon SI, Marrin ML. "The need for needs assessment in continuing medical education." *British Medical Journal* 2004; 328(7446):999-1000.
- Perol D, Boissel JP, Broussolle C, Cetre JC, Stagnara J, Chauvin F. "A simple tool to evoke physicians' real training needs," *Academic Medicine* 2002;77(5):407-410. Abstract.
- Rekhter N, Togunov IA "Needs assessment for health care management education in Russia." *Journal of Continuing Education in the Health Professions* 2006 Fall; 26(4):314-26. Abstract.
- Rethans JJ. "Needs assessment in continuing medical education through standardized patients". *Journal of Continuing Education in the Health Professions* 1998; 18:172-188. Abstract

Richardson ML, Norris TE. "On-line delivery of continuing medical education over the World-Wide Web: an on-line needs assessment." *American Journal of Roentgenology* 1997; 168:1161-1164. Abstract.

Shannon S. "Needs assessment for CME." *Lancet* 2003; 361(9361):974.

Tan KM, Casebeer L. "Needs assessment of learning outcome evaluation skills among continuing medical education providers." *Journal of Continuing Education in the Health Professions* 1998; 18:206-212. Abstract.

Tipping J. "Getting started with needs assessment: Part 2: The focus group." *Journal of Continuing Education in the Health Professions* 1998; 18:62-64.

Tipping J. Focus groups: a method of needs assessment" *Journal of Continuing Education in the Health Professions* 1998; 18:150-154. Abstract.

C. Articulate a statement of purpose

After identifying the target audience and their educational needs, write a statement which clearly states the rationale on which the activity or intervention is based and its value to learners. This statement summarizes the practice gap(s), articulates the educational need(s), identifies the appropriate target audience(s) and states in general terms the desired outcome(s) of the activity.

D. Develop objectives and content

The ACCME requires that all accredited CME providers design activities to change competence, and/or performance, and/or patient health. Providers must also measure the effectiveness of CME activities in fostering these changes. CME activity directors are challenged, therefore, to develop objectives and content with the **outcome of "change" in mind**. Outcomes-based education starts from a simple premise: that the content should be defined by the desired outcomes.

All elements of the planning process are therefore connected and held together by the overall purpose of the activity.

Writing clear learning objectives is an important educational practice that helps connect educational needs with content. The activity learning objectives are derived from the identified needs and specify, ideally **in measurable terms**, what learners should be able to do after participating in the activity. Objectives should be presented in concise, well-written statements that express desired outcomes. Avoid vague phrases such as:

- "...physicians will update their knowledge of..."
- "... appreciate new methods of..."
- "... will become familiar with..."

Clearly stated activity objectives act as guidelines to the development of content. Content may be sought or solicited based on what the activity planners feel will best achieve the stated objectives. In the same way, suggested content is held up to the standard of the objectives, and accepted or discarded based on its ability to meet the objectives.

Example of a "bad" learning objective:

- Explain and discuss current initiatives and effective modalities to prevent incidence of complications such as infection or wrong-sided block.

This is a classic example of a "teaching" objective, as it is the objective of the teacher, not of the learner.

Example of a "good" learning objective:

- .. Prevent incidence of complications such as infection or wrong-sided block using current initiatives and effective modalities.

This objective now identifies a practice strategy to be implemented by the learner.

E. Planning Process: Gaps, Objectives, Outcomes

| Practice Gap | Learning Objective | Desired Outcome |
|---|---|---|
| There is a lack of recognition among nonspecialists and patients of the importance of diagnosing and treating RA early | Describe the major immunologic mechanisms that both lead to rheumatoid arthritis (RA) and are potential targets for treatment | Primary care physicians will diagnose and refer RA patients earlier in the disease process |
| Health care practitioners lack guidance on the selection of disease activity measures to guide therapy | Select the most accurate and practical disease activity measures to optimize treatment and disease control | Physicians will use up-to-date algorithms and disease activity measures in selecting treatments for RA |
| Physicians lack a clear understanding of the pathophysiology of RA and the role of current options, including monotherapy and combination therapy in addressing the pathophysiology | Prescribe the best treatment options for patients with RA and know when to employ them | Physicians will better understand the pathophysiology of RA and the role of current treatments in addressing the pathophysiology, and will more effectively apply available treatments for RA |
| Physicians do not always appropriately identify patients who are not responding and do not switch therapies as appropriate | Identify patients who do not respond to a given drug therapy early on, and select appropriate alternative treatment | Physicians will appropriately recognize and treat patients who do not respond to therapy |
| Physician understanding of the long-term effects and safety implications of biologic agents and of approaches to managing safety issues is suboptimal | Assess the long-term effects and safety issues of biologic agents for RA and evaluate strategies for effectively managing safety issues | Physicians will select appropriate therapies for long-term treatment of RA and will have strategies in place for managing safety issues |

Resources

On Adult Learning Formats:

www.innoviaeducation.com/website/resources

www.bmj.com/cgi/content/full/326/7382/213

www.bmj.com/cgi/content/full/326/7391/703

On Experimental Learning:

Kolb, D.A. (1984) *Experiential Learning: Experience as the source of learning and development*. New Jersey: Prentice-Hall.

On learning from reflection Via analogical reasoning and comparison

Gentner, D. (1983). "Structure-mapping: A theoretical framework for analogy" *Cognitive Science*, 7, 155-170.

Gentner, D. (1998). "Analogy. In W. Bechtel & G. Graham (Eds.)," *A Companion to Cognitive Science* (pp. 107-113). Oxford: Blackwell.

On mental models/frameworks for application

Gentner, D. (2002). "Mental models, psychology of. In N. J. Smelser & P. B. Bates (Eds.)," *International Encyclopedia of the Social and Behavioral Sciences* (pp. 9683-9687). Amsterdam: Elsevier Science.

On deliberate practice

Ericsson, K.A., Krampe, R, & Tesch-Romer, C. (1993). "The role of deliberate practice in the acquisition of expert performance." *Psychological Review*, 100(3), 363-406. Ericsson, K.A., & Lehmann, A C. (1996). "Expert and exceptional performance: Evidence of maximal adaptation to task constraints." *Annual Review of Psychology*, 47, 273 - 305.

Other resources:

Casebeer L, Center RM, Kristofco RE. "Learning in Large and Small Groups. In: The Continuing Professional Development of Physicians: From Research to Practice: Davis O, Barnes BE, Fox R (eds). Chicago: *American Medical Association*, 2003.

Steinert Y. "Twelve tips for effective small-group teaching in the health professions." *Medical Teacher* 1996; 18:203-207.

Steinert Y. "Interactive lecturing: Strategies for increasing participation in large group presentations." *Medical Teacher* 1999; 21:37-42.

Step 3: Develop Measures of Effectiveness

The ACCME requires that all CME providers measure the effectiveness of their CME activities in changing competence, performance and/or patient health. Consideration of effectiveness measures begins at the early stages of course planning and design. If activity objectives are clearly articulated, they become valid means by which to measure educational outcomes. OCME will work with activity planners to establish these measures and incorporate them into an appropriate evaluation mechanism.

Evaluation mechanisms can include:

- Questionnaire for all participants (OCME uses a standard survey)
- Questionnaire for random participants
- Focus group(s)
- Pre- and post-tests to measure changes in knowledge, attitudes, competence and/or performance
- Audience response system during session(s) (can be used for pre- and post-testing)
- Follow-up surveys of participants to measure application of learning to their practices
- Assessment of patient health data
- Chart reviews

If a standard evaluation form is used, OCME will distribute the instrument and collect and tabulate the data. OCME will send a summary of the results to the activity director, department chair and CME service coordinator for review within a few weeks of the activity end date. OCME may also conduct three-month follow-up surveys to assess learner changes in practice.

Resources on Evaluation:

www.bmj.com/cgi/content/full/326/7390/643

www.bmj.com/cgi/content/full/326/7385/385

www.bmj.com/cgi/content/full/326/7392/753#SEC2

CA: Berrett-Koehler Publishers, 1998. Dixon J. "Evaluation criteria in studies of continuing education in the health professions: A critical review and a suggested strategy;" *Evaluation and the Health Professions* 1978; 1:47-65.

Step 4: Establish an Activity Budget

As soon as possible after the CME activity is planned, the activity director and/or the department's CME service coordinator will meet with OCME staff to finalize the budget. The standard CME activity budget template will be used for this process and to establish the level of need for external funding.

Activity expenses will be estimated utilizing historic and comparative cost data from prior or similar activities. The activity will follow established policies for customary and reasonable limits for estimating expenses for hotel, food functions and speaker honoraria.

The required income to offset 100 percent of expenses will also be calculated. Funding for the activity is typically generated from a combination of registration fees, external grant funding, exhibit fees, and in some cases, departmental or institutional funds. OCME staff will submit all grant applications in its collaborative role to our activity directors, and will provide full financial and logistical management support.

Step 5: Complete the CME Activity Application and Planning Form with Information from Step 2

The activity director is responsible for completing and submitting a CME Activity Application and Activity Planning Worksheet (page 17). This form should include the following attachments:

- Activity budget template
- Preliminary program agenda
- Signed faculty disclosure forms for the activity director, planning committee members, independent clinical reviewer (if applicable) and all confirmed faculty
- Joint or co-sponsorship letter of agreement (if applicable)
- Information about the joint sponsor organization (if applicable)
- A suggested activity evaluation form if the activity will not use the standard OCME evaluation form, or other methodology
- A list of potential external supporters for the activity (pharmaceutical, medical device, other commercial, government, foundation)

Step 6: Committee Review and Approval

Once the CME Activity Application is submitted to the Office for Continuing Medical Education (OCME), the document will be presented to the CME Committee for review and accreditation sponsorship. The activity application should be submitted to OCME at least six months prior to the start date of the activity; 12-18 months for international/national programs.

The CME Committee meets monthly. Activity applications are presented to the Committee for approval at that time. Individual activity directors may be asked to attend the CME Committee meeting and respond to any questions concerning the activity before credit is designated.

Step 7: Understand your Responsibilities as Activity Director

To ensure a smooth process, we have outlined the respective roles and responsibilities of the activity director and OCME staff:

A. Activity Director Responsibilities with Assistance of CME Service Coordinator

The activity director is responsible for the following activity tasks:

1. If a live activity, select dates that do not conflict with national or regional meetings, other similar programs or religious holidays in conjunction with OCME staff.
2. Appoint and convene a planning committee.
3. Complete the CME Activity Application and Planning form, including:
 - 3a. Document a needs assessment process for the activity that identifies professional practice gaps and educational needs for a target audience using multiple sources and methods. Include documentation of need, such as literature reviews, planning committee minutes and past meeting evaluations summary.
 - 3b. Document a planning process that links identified educational needs with learning objectives content and measures of effectiveness.
 - 3c. Write a statement of purpose for the activity.

- 3d. Write learning objectives that describe a specific outcome(s) in terms of an improved learner behavior or practice.
- 3e. Design activity content that will meet the expressed objectives.
- 3f. Define measures of effectiveness for the activity and assist in the development of evaluation tools.
- 3g. Initial preparation of the activity budget template.
- 4. Select and recruit well-qualified faculty experts as planners, presenters and authors.
- 5. Ensure all faculty disclosure information is obtained and disclosure forms are signed and returned with the CME application submission. In concert with OCME, identify and resolve all conflicts of interest.
- 6. Ensure that the content and the individual faculty presentations are free from commercial bias, balanced and do not promote the proprietary interests of any commercial entity.
- 7. Validate clinical content personally or delegate this responsibility to an "independent clinical reviewer." Ensure content is robust, unbiased, and evidence based and addresses the specific learning objectives.
- 8. Attend the activity to monitor content and ensure compliance with disclosure requirements and to observe faculty and learner performance.
- 9. Ensure that all commercial support is used appropriately and in accordance with ACCME and hospital policies.
- 10. Provide a summary statement of activity effectiveness once the activity has ended. The statement should include:
 - o Whether the learning objectives were achieved
 - o Whether follow up activities should be planned or physician practice improvements should be implemented as a result of the activity.

B. Office of Continuing Medical Education (OCME) Responsibilities

The OCME will assume responsibility for the following activity tasks:

- 1. Convene planning and coordination meetings throughout the process.
- 2. Manage accreditation and sponsorship process, including needs assessment supporting documentation.
- 3. Assure activity compliance with all ACCME Criteria and Standards for Commercial Support.
- 4. Oversee financial management for the activity, to include submitting requests for external funding to commercial, foundation or government supporters; letters of agreement; arranging in kind support.
 - 4a. Administer speaker and honoraria payments and disclosure process.
 - 4b. Collect and disburse all activity income and vendor payments.
- 5. Manage activity event planning, marketing and logistical services: space reservations, hotel and vendor selection, contracting food functions.
- 6. Maintain registration records, inquiries and problem resolution.
- 7. Assemble and reproduce activity binder.
- 8. Supervise on site activity management and supplies.
- 9. Develop and distribute CD-ROM of Power Point presentations (post live activity)
- 10. Reconcile budget and provide with final CME report.
- 11. Develop evaluation summary reports and documentation of educational outcomes.

C. Timeline for Planning and Implementing CME Activities

No Later than Nine Months Out (12-18 months for international/national programs)

- Meet with OCME for pre-planning discussion
- Convene activity planning committee
- Gather evidence of activity need and define learning objectives
- Complete and submit CME Activity Application and Activity Planning Worksheet for credit approval by the CME Committee
- Reserve activity space, e.g., research hotel sites or on site meeting rooms, etc. (For larger programs that require meeting space for over 75 participants as well as sleeping rooms, it is recommended that a hotel contract be completed 12 months in advance if a financial commitment can be made by the sponsoring department)
- Prepare and mail "save the date" card and post initial web-site announcement
- Suggest and/or research potential commercial supporters and other external sources of funding for the activity

Six Months Out

- Determine activity format(s)
- Select topics and develop science-based content
- Identify and invite expert faculty
- Select and sign hotel and catering contracts
- Select and sign AV and vendor support contracts
- OCME to begin submitting applications for commercial and other external funding

Five Months Out

- Confirm all speakers
- Initiate and complete faculty disclosure process
- Resolve any faculty/planner/reviewer conflicts of interest
- Design, produce and mail promotional materials/brochures/place advertisements/web-ads
- Begin detailed logistical planning
- Begin participant registration and confirmation process

Three to Four Months Out

- Work with faculty on development of presentations; align with activity learning objectives
- Coordinate faculty presentations via faculty group conference call
- Initiate educational support and Letter of Agreement process with all external supporters
- Continue logistics planning
- Mail brochure announcements and post to website (for international courses 6-12 months out)

Two to Three Months Out

- Review faculty presentations (content validation) for conflicts of interest and compliance with ACCME Criteria and Policies
- Get copyright permissions for all journal articles, etc.

One Month Out

- Prepare activity binder and handouts for duplication
- Schedule pre conference coordinating meeting with all faculty and moderators
- Work out final logistics: meal function menus, room block size, etc. with hotel

Step 8: Finalize All Arrangements and On-site Logistics

Once the activity has been reviewed and approved by the CME Committee, the activity director, department service coordinator and OCME staff will meet to begin implementation of the activity and assign tasks.

Step 9: Post-Activity Budget Reconciliation

As soon as the necessary financial information is available, the OCME completes a detailed budget reconciliation of activity income and expenses and arranges for the disbursement of surpluses to the sponsoring department.

Step 10: Read all ACCME and OCME Policies and Procedures

Most importantly, the activity director should be familiar with all ACCME and OCME policies and procedures that govern the development and compliance of CME activities at the hospital.

Resources:

- ACCME Essentials and Standards for Commercial Support - www.accme.org
- OCME Policies and Procedure Manual
- CME Glossary of Terms
- Macy Foundation Report on Continuing Education in the Health Professions: Improving Healthcare Through Lifelong Learning - www.josiahmacyfoundation.org
- ACCME Report: CME as a Bridge to Quality - www.accme.org/index.cfm/fa/news.detail/News/.cfm/news
- www.acme-assn.org/aclc/library/top100books.pdf
- www.acme-assn.org/valuable_resources
- AMA- Physicians Recognition Award and Credit System - www.ama-assn.org/go/pr

III. Enduring Materials and Internet CME

Not all CME must be presented at a traditional live conference. Enduring materials offer the chance to provide education to a wider audience in a cost-effective manner, as well as archiving presentations for future reference.

Activity directors are encouraged to consider enduring materials in an electronic format for posting to the web site. Enduring materials: 1) may be separately accredited for CME, typically for a 12 month period; 2) may include audio and/or video recording of selected presentations during live conferences presentations that are studio taped specifically for an Internet CME activity or CD-ROM; 3) can incorporate pre- and post- tests to measure learner change in knowledge and/or competence; and 4) may be accessed by thousands of potential learners.

Activity directors interested in developing an independent CME enduring material or a companion enduring material re-purposed from a live conference should indicate this on the CME Activity Application. Production and delivery costs will then be included in the activity budget for funding considerations.

IV. Links to CME Resources, and Helpful Tools

Useful Tools

1. Activity Planning Worksheet

Educational Linkages: Connecting Identified Needs with Desired Results

Title of activity _____

Department: _____

Date: _____

***At least one of the Educational Needs you identify must be Competence or Performance**

| Identified Needs List the identified professional practice gaps and the educational needs that underlie them (in terms of knowledge/competence/performance) | Objectives List the learning objectives for each need identified, in terms of competence, performance, or patient health outcomes | Methodology List the educational format(s) to be used to accomplish the stated objectives. Multiple methods may be utilized for one CME activity | Desired Changes List the changes in physician knowledge, competence, performance, and/or patient health. |
|---|---|--|--|
| | | | |

2. Useful Verbs for Writing Educational Objectives

Recommended Verbs for Educational Objectives

Verbs that are more open to interpretation, such as appreciate, believe, know, learn, and understand should be avoided. *Your list of objectives should never be limited to just those expressing Information or Comprehension.*

* Ensure that your list includes objectives expressing Application, Analysis, Synthesis and Evaluation, as these will better represent learner competence and performance goals.

| Information | Comprehension | Application* | Analysis* | Synthesis* | Evaluation* |
|-------------|---------------|--------------|---------------|------------|-------------|
| cite | associate | apply | analyze | arrange | appraise |
| count | classify | calculate | appraise | assemble | assess |
| define | compare | complete | contract | collect | choose |
| describe | compute | demonstrate | criticize | compose | critique |
| draw | contrast | dramatize | debate | construct | determine |
| identify | describe | employ | detect | create | estimate |
| indicate | differentiate | examine | diagram | design | evaluate |
| name | discuss | illustrate | differentiate | detect | grade |
| point | distinguish | interpolate | distinguish | formulate | judge |
| quote | estimate | interpret | experiment | generalize | measure |
| read | explain | locate | infer | integrate | rant |
| recite | express | operate | inspect | manage | rate |
| recognize | extrapolate | order | inventory | organize | recommend |
| record | interpolate | practice | question | plan | revise |
| relate | interpret | predict | separate | prepare | score |
| repeat | locate | relate | summarize | prescribe | select |
| select | predict | report | | produce | test |
| state | report | restate | | propose | |
| tabulate | restate | review | | specify | |
| tell | review | schedule | | | |
| trace | translate | sketch | | | |
| write | | solve | | | |
| | | translate | | | |
| | | use | | | |
| | | utilize | | | |

3. Brochure

OCME staff will prepare a brochure as part of a comprehensive marketing program for your CME activity. The front cover of your brochure will include the following information:

- Activity title
- Start and end date/time
- Location (building, room and street address)
- Hospital for Special Surgery name and logo
- Sponsoring department name and/or logo
- Joint sponsor name and/or logo (if applicable)
- Accreditation statement(s)

The body of your brochure will include the following information:

- Learning objectives
 - Target audience
 - Detailed schedule of program including: educational sessions by day, times, topics and speakers, as well as food functions and breaks
 - Name of activity director(s)
 - Planning committee members
 - Conflict of interest statement
 - Faculty disclosure statement
 - Names and affiliations of all speakers
 - Credit designation statement(s) by type(s) and number of credits/hours
 - Registration deadline
- Registration fees
- Cancellation/refund policy
 - Hotel accommodations/reservations
 - Parking information
 - Map of the vicinity (if necessary)
 - Brief acknowledgement of commercial supporters (optional)
 - Contact information for inquiries

The OCME will include a standard registration form:

- Registration deadline
- Instructions for registering (by mail and/or online)
- Participant registration fee
- Methods of payment accepted
- Space for credit card information
- Space for registrant's name, street address, city, province/state, postal/zip code, phone, fax, email address
- Other information as required

4. CME Forms and Templates

- Activity application and planning document
- Activity budget spreadsheet
- Faculty disclosure form
- Joint sponsorship letter of agreement
- Co-sponsorship letter of agreement
- Outcome assessment tool (evaluation)
- Financial letter of agreement