**Guide to Completing Yale CME Application**

To apply for CME credit for a medical education activity, the planning team must complete the “Yale CME Application” (available at: https://yale.cloud-cme.com/Application.aspx) approximately 4-6 months prior to the program. This form facilitates analysis and serves as the main tool for managing the activity from beginning to end. Each section guides you through the process and contains questions that pertain to the criteria required for CME.

The main components beginning on tab 3 of the application are briefly described below:

1. **Identification of practice gaps**
   To begin the planning process, you will need to identify the learners’ clinical practice gaps – that is, the difference between actual and ideal practices in regard to knowledge, competence, performance and/or patient outcomes.

   To do this, first identify the current or actual practice. Sources most commonly used to describe current or actual practice are planning team members and other colleagues; patient data; clinical practice guidelines; quality improvement data; chart reviews; data from federal, state and local sources; and literature reviews. Data from a source with a commercial interest should not be used. An analysis of these data provide, as a baseline, what most physicians know, their competence levels and performance results, and the impact on patients.

   Then, identify the ideal or “best” practice. To determine best practices refer to the accepted practice guidelines, consensus statements, federal/local government practice guidelines and other authoritative sources.

2. **Identification of needs**
   To identify needs, one must determine the gaps or differences between the current or actual practice and the ideal or best practice. Gaps between the current practice and ideal practice manifest educational needs which a learning intervention is designed to address. Gaps are expressed in terms of knowledge, competence, performance, and patient outcomes.

   Let’s define what we mean by those terms:
   - **Knowledge** is defined as awareness and understanding and is the underlying basis for competence. CME activities cannot be credited based on knowledge alone.
   - **Competence** is defined as the ability to apply knowledge, skills, and judgment in practice (knowing how to do something).
   - **Performance** is defined as what one does, in practice. The degree to which participants do what the activity intended them to do. Performance is competence put into practice.
- **Patient Outcomes** are the consequences of performance and are defined as the ability of the learner to apply what they have learned to improve the health status of their patients or those of a community.

Take the current practice and the ideal practice you listed in the first section to identify the gap. State the gap in the first column. To address the gap, what will be the educational need? State that in the second column. Then determine if it’s a knowledge, competence, performance or patient outcome gap.

For example, you could look at a list of articles that describe case studies of a certain clinical problem. And from that, you could deduce that the most common reason for missing this diagnosis is the lack of knowledge of a certain pathophysiology and a lack of strategy for an intervention under certain clinical situations. The professional practice gap is the lack of understanding, the lack of knowledge, and the lack of strategy to intervene. Your physicians may not have the knowledge of this certain disease entity and they don’t have the appropriate strategies to intervene when they see this clinical scenario. Or possibly, that a new guideline was published last week; no one has seen it and no one knows how to manage patients using this clinical guideline.

Say for example your practice problem is that you’re seeing little success in motivating patients to quit smoking. Here’s a concrete example written in terms of the application:

<table>
<thead>
<tr>
<th>Current Practice</th>
<th>Best Practice</th>
<th>Gap</th>
<th>Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is cynicism about patients’ ability to quit tobacco use. Many physicians do not use pharmacological therapies due to inadequate training and perceptions of patient motivation and success.</td>
<td>Specific guidelines are available on how to motivate patients to successfully quit tobacco use.</td>
<td>There is a misperception and lack of education regarding patients’ motivation which affects physicians’ willingness to engage in counseling the patient and conduct follow-up.</td>
<td>There is a need for additional knowledge, techniques and strategies in regard to ways to motivate patients to quit tobacco use.</td>
</tr>
</tbody>
</table>

The type of gap expressed above includes knowledge and competence.

You may have already conducted a needs assessment which led to the determination that a learning intervention was needed.

3. **Development of learning objectives and expected results**

Prior to identification of agenda topics, and selection of content and faculty, the planning team must develop clear objectives based on identified educational needs. Objectives are written to bridge the gap between the current and best practice. They are statements of what participants can expect to learn by attending the activity. Objectives are the foundation and road map for development of the content; therefore, they must be written to be SMART (Specific, Measurable, Actionable, Relevant and Time-specific.) For additional
information on how to write educational objectives and samples of what good objectives look like, see “Writing Measurable Educational Objectives” available from the website.

When objectives are articulated, then the desired results can be developed based on achievement of the objectives. Results (or a change in competence, performance and/or patient outcomes) are the ultimate goal of the educational intervention, and are expressed in terms of a change in behavior or outcomes consistent with the type of gaps identified during the needs assessment phase.

4. **Needs Assessment Data and Source**

   Once you’ve completed the previous sections, simply mark the sources you used to identify your professional practice gaps. If you’ve already conducted a formal needs assessment which led to the determination that a learning intervention was needed, refer to that and include it as an attachment.

   For more information, refer to Needs Assessment for additional information on the needs assessment process and an example of a needs assessment study.

5. **Identification of target audience and learners’ scope of practice**

   This step requires the planning team to state who would benefit from attending this activity and why. The topics to be included must take into account the learners’ current practice environment, potential needs, and application to daily practice. The content must be practical, useful, and fulfill the learning needs of the target audience.

6. **Faculty Selection**

   Topics selected should be based on identified needs, learning objectives and expected results.

   When selecting faculty, take into account important criteria that make a learning intervention effective. The faculty should be experts in the subject matter the activity covers and should have the requisite skills to effectively impart knowledge and utilize formats for the appropriate domain of learning.

7. **Determination of activity type and format**

   The guiding principles in the selection of the activity type and format are:

   - The type of gap, expressed as knowledge/competence, performance, or patient outcomes
   - The objective of the learning activity and the level of change expected
   - The best use of adult learning principles
   - The preferred learning methods/styles of the target audience
   - The reinforcement of learning through such things as sequencing and additional materials/tools

   Taking these principles into consideration for selection of activity type and format make the CME activity more effective.

8. **Linkage to desirable physician attributes**

   CME activities must be developed in the context of desirable physician attributes, that is, the core competencies identified by the American Board of Medical Specialties (ABMS),
Accreditation Council for Graduate Medical Education (ACGME), Association of American Medical Colleges (AAMC) or Institute of Medicine (IOM). Examples of these competencies are medical knowledge, patient care, professionalism and work in interdisciplinary teams, to name a few.

9. **Identification of real or potential barriers and patient safety considerations**
   As a part of planning a CME activity, the planning committee is encouraged to give consideration to the system of care in which the learner will incorporate new or validate existing learned behaviors. CME planners must be sure to identify barriers that could block implementation (e.g. formulary restrictions, time not allotted for implementation of new skills, insurance doesn’t reimburse for treatment, organization doesn’t support educational efforts, lack of resources, policy issues within organization, etc.) and discuss strategies to overcome or remove those barriers (if possible) in the content of the CME activity. If applicable, planned activities should be examined for patient safety concerns in accordance with the national public interest.

10. **Evaluation of effectiveness**
    All educational activities sponsored by Yale CME must be evaluated for effectiveness. The methods chosen to evaluate the activity should be based on the type of gap addressed (knowledge/competence, performance and/or patient outcomes), the objectives and the desired outcomes. For example, questionnaires and surveys are good at measuring knowledge and competence. However, performance must be measured in terms of the degree to which participants can do what the activity intended them to do. This type of gap might best be measured through direct observation (labs and case studies) or follow-up surveys. If you’re measuring for patient outcomes, the evaluation tool needs to look at what the learner implemented that improves patient outcomes. This may be acquired from actual post-activity data or self-assessment by the attendees.

    Yale CME has adopted an outcomes assessment model introduced by Moore, Green and Gallis in 2009 (the article “Achieving Desired Results and Improved Outcomes: Integrating Planning and Assessment Throughout Learning Activities” discusses this further.) This model describes 7 outcomes levels as follows:

    - Level 1 Participation
    - Level 2 Satisfaction
    - Level 3 A Learning: Declarative Knowledge (Knows)
    - Level 3 B Learning: Procedural Knowledge (Knows How)
    - Level 4 Learning: Competence (Shows How)
    - Level 5 Performance (Does)
    - Level 6 Patient Health
    - Level 7 Community Health

    All Yale CME certified activities are assessed automatically at Levels 1-3 through the registration process and the standard evaluation questionnaire at the end of each activity. While this questionnaire contains questions that assess learning in both Levels 3A and 3B, the measure is subjective and relies on self-reporting of knowledge gained. To make the results more objective, we require CME planners to go beyond self-report measures by including pre and post-tests.
At level 4, the evaluation questionnaire asks participants to indicate what they intend to change in their practice as a result of their participation. Once again, this is subjective. To strengthen learning and enhance competence, it is best to include opportunities that enable physicians to practice what they learned in the educational setting, such as through case studies using an Audience Response System and use of other hands-on opportunities that can demonstrate competence.

Post-activity outcomes measurement surveys go further in objectively measuring competence and some performance-based change – the level 5 outcome. Within two to three months of the CME activity, the activity participants are asked if they have fully implemented, partially implemented or were unable to implement the changes they intended to make. The limitation of this data is that it is self-reported. However, in the absence of actual observation of a physician’s performance in practice, this information serves as a marker that is indicative of actual change. Other assessment strategies are discussed during the planning meetings which may include additional surveys and interviewing attendees during the activity. Where possible, outcome measurement studies should be conducted to assess patient outcomes. Yale CME may seek assistance of the activity director or other faculty in formulating relevant outcomes questions.

11. Identify potential commercial support
Commercial support is allowed for CME activities; however, activities must be developed without influence or interference from these funding sources. In addition to listing potential commercial supporters, all planning team members are asked to verify that they have read and agree to abide by the ACCME Standards for Commercial Support. All commercial support for a CME activity must have the full knowledge and approval of Yale CME.

All educational grants to support CME programs, must meet the conditions and terms outlined in the Yale’s policy on Commercial Support. The intent of the policy is to ensure that relationships with commercial entities remain within acceptable professional boundaries and the CME activities are independent and free from commercial bias. The majority of the educational grant applications are initiated and managed by the Yale CME office. When a requesting department or organization directly applies to pharmaceutical or device companies for educational grants and receives grant funds, a copy of the signed company’s Letter of Agreement (LOA) must be provided to the Yale CME office. If the company does not have a LOA form, a Yale CME Commercial Agreement Form must be completed and signed. All LOA’s for the grants applied by the Yale departments must be approved by the Yale University’s Office of Research Administration prior to acceptance.

12. Identify potential partners and allies
Working with other organizations and departments can make for a well-rounded team that helps in generating ideas and resources to accomplish the learning objectives and close the educational gap in the learners. It also will increase access to scarce resources, improve efficiencies, and produce synergistic partnerships. Take time to seek out what other activities and efforts are underway on the same issue.
Completed applications are reviewed carefully by the CME Director before approval. If the completed application does not satisfy the ACCME and Yale CME criteria, it will be returned to the planning team for revision. Applications are reviewed to be sure that:

- objectives conclude a logical path from practice gaps to needs, and correct domains (knowledge, skills and attitudes) are chosen
- educational needs that underlie the professional practice gaps address knowledge and competence, performance and/or patient outcomes
- primary data and/or literature are assembled in the needs analysis and they reasonably support the planning team’s documented thinking and process
- desirable physician attributes and/or authoritative competency frameworks (e.g., IOM, ABMS, ACGME, AAMC) have been considered and incorporated effectively
- activity type and format are appropriate to deliver the desired results
- constraints, barriers and patient safety issues will be addressed
- health care disparities and cultural competency factors are identified, and
- method(s) of evaluation chosen will effectively measure outcomes