Needs Assessment, Practice Gaps, and Outcomes Measurement
Professional Practice Gaps

Needs Assessments

A needs assessment is an analysis of the type of CME that is needed by the intended audience for a CME program, which has been proposed or conducted. The results of a needs assessment are used in the design and planning of the content and delivery modality for CME programs. There are four criteria that must be met when requesting AOA Category 1-A or Category 1-B credit for pre-approval.

1. The needs assessment must be conducted on an annual basis for each program.
2. A needs assessment must be included for each presentation.
3. The needs assessment must be timely – current for the field.
4. The needs assessment must be documented – at least one source must be evidence-based.

Programs that are exempt from providing needs assessments are as follows:

1. OMM/OMT/OPP – state that is "part of the profession" in documentation.
2. Core competencies that are not clinical (professionalism, communications, systems-based practices, etc.) – state "core competency required for specialty."
3. Faculty development programs.
4. State requirements such as, risk management.
5. Board preparation courses – state "based on pass rate on board scores."

Needs Assessment Sources

- Surveys (including survey of past activity participants, and survey of target audience)
- Committee Meeting minutes
- Expert opinion
- Evaluation results/Reports from other educational activities
- Informal discussions/interviews
- Focus groups
- Interviews
- Consensus conferences
- Epidemiological data
- New advances in clinical treatments/evidence-based sources
- Legislative or organizational changes that affect patient care
- Quality assurance data
- Peer-reviewed journal articles

Guidance on development of a needs assessment/gap analysis for your program can be requested through the CME Office. Please contact Amy Drittler at Amy.Drittler@LMUnet.edu.

Practice Gaps

The professional practice gap is the difference between the *current* state of knowledge, skills, competence, practice, performance or patient outcomes and the *ideal* or *optimal* state.

Questions and Checklist for CME Activity Planning	
What is the practice gap to be addressed?	
Is the practice gap in physician knowledge, competence, performance, or patient outcomes?	
What is the physician target audience	
What are the potential or real barriers facing these physicians in addressing the gap?	
What are the desired results or activity for change?	
Based on the desired results, what are the objectives for the activity?	
Are there FSMB Maintenance of Licensure (MoL), ABMS Maintenance of Certification (MoC) programs, or AOA core competencies related to this change?	
Are there other departments/initiatives for working collaboratively on the issue?	
Based on the determined need of the target audience and the identified gap, what content should be covered?	
What is the best instructional method?	
How will the activity be evaluated?	

CME Outcomes Measurement and Descriptions

Outcomes Measurement: The tabulation, calculation, or recording of activity or effort that can be expressed in a quantitative or qualitative manner (when attempting to measure shifts or progress toward desired levels of quality).

Knowledge: The degree to which participants state *what* the CME activity intended them to know and *how* to do what the CME activity intended them to know how to do.

Competence: The degree to which participants *show* in an educational setting *how* to do what the CME activity intended them to do.

Performance: The degree to which participants *do* what the CME activity intended them to be able to do in their practices.

Patient Outcomes: The degree to which the health status of patients improves due to changes in the practice behavior of participants.

Frameworks for Outcomes Measurement in Continuing Medical Education

There are several frameworks for outcomes measurement in CME practice. Three are illustrated below.

1. Moore's Seven Levels of CME Outcome Measures
2. Miller's Pyramid of Assessment
3. PRECEDE-PROCEED Model

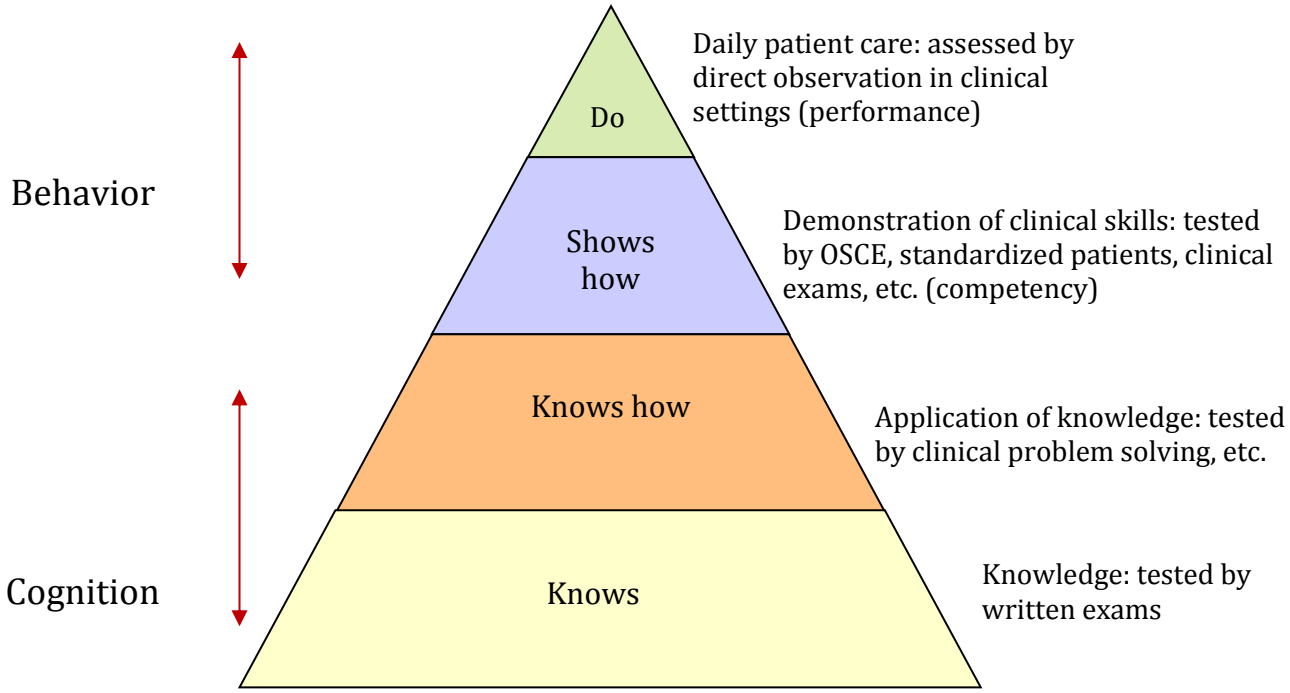
Moore's Seven Levels of CME Outcome Measures

Level			Description	Source of Data
Level 1: Satisfaction			The number of physicians and others who participated in the CME activity.	Attendance records
Level 2: Satisfaction			The degree to which the expectations of the participants about the setting and delivery of the CME activity were met.	Questionnaires completed by attendees after a CME activity
Level 3: Learning	Knows	3a: Declarative Knowledge	The degree to which participants state what the CME activity intended them to know.	*Objective:* Pre- and posttests of knowledge *Subjective:* self-report of knowledge gain
	Knows how	3b: Procedural knowledge	The degree to which participants state how to do what the CME activity intended them to know how to do. i.e. diagram	*Objective*: Pre- and posttests of knowledge *Subjective:* Self-report of knowledge gain
	Shows how	Level 4: Competence	The degree to which participants show in an educational setting how to do what the CME activity intended them to be able to do. i.e. return demonstration	*Objective:* Observation in educational setting *Subjective:* Self-report of competence, intention to change
Level 5: Performance			The degree to which participants do what the CME activity intended them to be able to do in their practice. i.e. CAP program and AOA policy	*Objective:* Observation of performance inpatient care setting; patient charts; administrative databases *Subjective:* Self-report of performance
Level 6: Patient Health			The degree to which the health status of patients improves due to changes in the practice behavior of participants. i.e. hospital statistics	*Objective:* Health status measures recorded inpatient charts or administrative databases *Subjective:* Patient self-report of health status
Level 7: Community Health			The degree to which the health status of a community of patients changes due to changes in the practice behavior of participants. i.e. state/national statistics	*Objective:* Epidemiological data and reports *Subjective:* Community self-report

Source: Moore, D., E. A framework for outcomes evaluation in the continuing professional development of physicians. In: Davis, D. A., Barnes, B. E., & Fox, R. D. (2003). *The continuing professional development of physicians : from research to practice*. Chicago: AMA Press.

Miller's Pyramid of Assessment

Miller's Pyramid of Assessment provides a framework for assessing clinical competence in medical education and can assist clinical teachers in matching learning outcomes (clinical competencies) with expectations of what the learner should be able to do at any stage.



Adapted from: Ramani S, Leinster S, AMEE Guide no 34: Teaching in the clinical environment. *Medical Teacher*, 2008:30(4):347-364.

Descriptions and Examples

Knows forms the base of the pyramid and the foundation for building clinical competence.

Ex1: Learner is assessed his/her knowledge of the ethics and principles of patient confidentiality through a multiple choice exam.

Ex2: Learner knows the epidemiology, signs and symptoms, pathophysiology, and treatment of congestive heart failure.

Ex3: Learner knows the indications, contraindications, and risks associated with the placement of a chest tube.

Knows how uses knowledge in the acquisition, analysis, and interpretation of data and the development of a plan.

Ex1: Learner evaluates his/her own moral thinking in a patient confidentiality delimma.

Ex2: Learner knows how to, given a patient encounter, utilize history and physical exam and diganostic test data to diagnose and stage congestive heart failure.

Ex3: Learner knows to, given an appropriate clinical scenario, place a chest tube.

Shows how requires the learner to demonstrate the integration of knowledge and skills into successful clinical performance.

Ex1: Learner demonstrates how he/she would respond to a standardized patient's ethical delimma.

Ex2: Learner shows how to develop and implement a treatment plan for a patient on congestive heart failure and effectively explain it to the patient and/or family.

Ex3: Learner shows how to place a chest tube.

Does focuses on methods that provide an assessment of routine clinical performance.

Ex1: Learner assessed through a patient satisfaction survey.

Ex2: Learner demonstrates the ability to evaluate the post treatment status of a patient with congestive heart failure and to revise the plan as warranted.

Ex3: Learner does the procedure of chest tube placement and implements post-procedure care.

PRECEDE-PROCEED Model (Green & Kreuter)

CME Planning

Predisposing	Enabling		Reinforcing
Recognizing and evaluating an opportunity for learning	Engaging in learning	Trying out what was learned	Incorporating what was learned
Example: CME planners compile information about current physician performance and contrast it with best practice (i.e., description of performance standard).	*Example:* CME planners supply knowledge related to the performance issue and provide opportunity to apply or demonstrate in an authentic setting (i.e., OSCE).		*Example:* CME planner provides steps to strengthen what was learned in order to be recalled in a patient encounter (i.e., practice guidelines).