

Defining Knowledge, Competence, Performance, and Patient Outcomes

Several important themes exist in the Updated Essential Areas and Accreditation Criteria. These include an emphasis on evaluation, improvement, and engagement with the environment. Understanding the terms, definitions, and examples that apply to these themes is important and the reason for this Surveyor Update issue. The following terms form the underpinnings of evaluation and are noted in several of the Updated Accreditation Criteria: *expected results, professional practice gaps, knowledge, competence, performance, and patient outcomes.*

Criterion 1 – The provider has a CME mission statement that includes all of the basic components (CME purpose, content areas, target audience, types of activities, expected results) with **expected results** articulated in terms of changes in **competence, performance, or patient outcomes.**

Criterion 2 – The provider incorporates into CME activities the educational needs (**knowledge, competence, or performance**) that underlie the **professional practice gaps** of their own learners.

Criterion 3 – The provider generates activities/educational that are designed to change **competence, performance, or patient outcomes** as described in the mission statement.

Criterion 11 – The provider analyzes changes in learners (**competence, performance, or patient outcomes**) achieved as a result of the overall programs activities/educational interventions.

Professional Practice Gap

The difference between actual and ideal performance and/or patient outcomes. In patient care, the quality gap is “the difference between present treatment success rates and those thought to be achievable using best practice guidelines.”

Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies. Fact Sheet. AHRQ Publication No. 04-P014, March 2004. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.ahrq.gov/clinic/epc/qgapfact.htm>

Since CME content is meant to address the needs of all physicians, it includes direct and indirect patient care. Therefore, the ACCME is using professional practice gap to refer to a quality gap in areas that include but also can go beyond patient care (e.g., systems’ base practice, informatics, leadership and administration).

Knowledge

The identified professional practice gap of the learner can be based on a range of needs. One such need includes knowledge that is the range of one’s “information or understanding, the sum of what is known.” A physician’s knowledge comes from previous education, experiences, and is also obtained through sources such as the

medical literature, lectures, and conversations with peers. For example, understanding the various classes of antibiotics, the names within each drug class, and those organism for which a particular antibiotic is or isn't effective is knowledge. How is knowledge measured? Criterion 11 requires providers to "analyze changes in learners (competence, performance, or patient outcomes)." So, it is acceptable to identify knowledge as the underlying need of the professional practice gap, but the provider will be expected to measure any change in terms of competence, performance, or patient outcomes. To measure competence, for example, the provider might assess the ability of the physician to recognize in a series of case-based questions when a particular antibiotic is or isn't effective.

Competence

Competence is the strategy a professional would apply in practice if given the opportunity. For example, competence is demonstrating the ability to apply in a case or simulated environment the knowledge of which class or type of antibiotic or antibiotics should be used on whom and when.

"Knowing how to do something"

Miller, G. The assessment of clinical skills/competence/performance. *Academic Medicine*, 65(9):S63-7, 1990

...is a combination of knowledge, skills and performance...the ability to apply knowledge, skills and judgment in practice.

Sanford, B. (Ed.). *Strategies for maintaining professional competence: A manual for professional associations and faculty*. Toronto, Canada: Canadian Scholars Press, Inc, 1989

The simultaneous integration of knowledge, skills, and attitudes required for performance in a designated role and setting.

Spencer, L.M., McClelland, D.C., & Spencer, S.M. (1994). *Competency assessment methods: History and state of the art*. Hay/McBer Research Press.

How is competence measured? To measure competence providers might conduct case studies, interviews, follow-up surveys, or other techniques that assess a physician's intention.

Performance

Performance is based on one's competence but is modified by system factors and other circumstances. Performance is the implementation of learned strategies. Performance is competence implemented, or applied in actual practice. For example, performance is prescribing an antibiotic in accordance with practice guidelines.

How is performance measured? Providers might use techniques such as patient surveys, performance testing, medical records, or other means by which physician performance is assessed.

Patient Outcomes

The Agency for Health Research and Quality of Health and Human Services describes patient outcomes as “the end results of particular health care practices and interventions. End results include effects that people experience and care about, such as change in the ability to function. In particular, for individuals with chronic conditions—where cure is not always possible—end results include quality of life as well as mortality.” Outcomes include measures of health improvements in an individual patient, community, or population.

For example, on the *individual* level, an outcome may be the improved health of an individual following their strep throat diagnosis and subsequent administration of an appropriate antibiotic. On the *community* level, a hospital that intervenes with efforts that include CME and then measures the effect of trying to decrease the patient demand for the most “powerful” antibiotic by instead relying on hospital and national standards would be measuring the impact on patient outcome. On the *population* level, an outcome might be the reduction of resistance rates to antibiotics following a national educational campaign.