Glossary of Competency-Based Education Terms

Some terms provided courtesy of Robert Englander, MD, MPH
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The following is a glossary of terms used in competency-based education for healthcare professionals, with the goal of standardizing the language to advance the field. Some of the definitions are based on the work of Jason Frank et al. in a August 2010 issue of Medical Teacher devoted to Competency-Based Medical Education. Additional input and definitions came from the input of the MedBiquitous® Competencies Working Group.

Competency Terms:

Competence
The array of abilities (Knowledge Skills, and Attitudes=KSA) across multiple domains or aspects of performance in a certain context. Statements about competence require descriptive qualifiers to define the relevant abilities, context, and stage of training. Competence is multidimensional and dynamic and entails more than just the possession of knowledge, skills and attitudes; it requires you apply these abilities in the clinical environment to achieve optimal results. It changes with time, experience, and setting.

Competence (Alternative Definition)
The habitual and judicious use of communication, knowledge, technical skill, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and the community being served.

Competency
An observable ability of a health professional related to a specific activity that integrates knowledge, skills, values, and attitudes. Since competencies are observable, they can be measured and assessed to ensure their acquisition. Competencies can be assembled like building blocks to facilitate progressive development.

Competency-based medical education
An outcomes-based approach to the design, implementation, assessment, and evaluation of medical education programs, using an organizing framework of competencies.

Competent
Possessing the minimum required abilities in all domains in a certain context at a defined stage of medical education, training or practice.

Domain of Competence
Broad distinguishable areas of competence that together constitute a general descriptive framework for a profession(s). (e.g. the six domains of competence described by the ACGME-Patient Care, Medical Knowledge, Professionalism, Interpersonal and Communication Skills, Systems-Based Practice and Practice-Based Learning and Improvement).

Progression of competence
For each aspect or domain of competence, the spectrum of ability from novice to mastery. The goal of medical education is to facilitate the development of a physician to the level of ability...
required for optimal practice in each domain. At any given point in time, and in a given context, an individual physician will reflect greater or lesser ability in each domain.

**General Terms:**

**Aspirational**
Having a strong desire for success or achievement. With regard to Milestones, exceeding the standard for ready for unsupervised practice in any given Milestones stream.

**Assessment**
An ongoing process of gathering and interpreting information about a learner’s knowledge, skills, and/or behavior.

**Competency Committee**
A trained group who can make assessments of the competency of a resident based on milestones and the evaluation tools used within the residency.

**Context Free**
Standards that are independent of the setting in which they are applied.

**Critical Deficiency**
A deficiency which has produced, or leads to a significant risk of producing harm. With regard to Milestones failure to engage at the novice stage of learning in any given Milestones stream.

**Curriculum**
A pathway of planned learning, designed to facilitate progressive development of specified competencies.

**Dreyfus Model of Skills Acquisition**
The Dreyfus model of skill acquisition is a model of how students acquire skills through formal instruction and practicing. The original model proposes that a student passes through five distinct stages: novice, competence, proficiency, expertise, and mastery.

**Entrustable Professional Activity (EPA)**
An activity that is part of the essential work of a profession, specialty or subspecialty with the following characteristics: requires the integration of knowledge, skills and attitudes and their demonstration within an authentic context; is independently executable within a given timeframe by qualified personnel; and leads to observable and measurable outputs. An EPA describes a unit of work, while a competency describes an individual.

The internal medicine GME community has embraced EPAs as a meaningful and manageable assessment strategy for focusing the assessment of trainees in the clinical environment performing highly synthetic (capturing multiple milestones) work-based activities. On Miller’s pyramid, these activities reflect the “does” level, or tip of the pyramid and reflects the critical work of the profession – delivery of safe and effective patient care.

**Evaluation**

**Formative Evaluation:** Assessment of a resident/fellow with the primary purpose of providing feedback for improvement as well as to reinforce skills and behaviors that meet
established criteria and standards without passing a judgment in the form of a permanently recorded grade or score.

**Summative Evaluation:** Assessment with the primary purpose of establishing whether or not performance measured at a single defined point in time meets established performance standards, permanently recorded in the form of a grade or score.

**Milestone**
Definition 1: Achievement of the next level of performance in a continuum.

Definition 2: An achievement point or threshold in medical education, training, or practice (e.g. transition from medical student to residency; earning entrustment in an EPA) defined by reaching predetermined performance levels for a given competency or across an aggregate of competencies.

Definition 3: A meaningful marker of achievement.

**Curricular Internal Medicine Milestones**
Granular descriptions of the specific knowledge, skills and attitudes/behaviors that describe competent behavior over the course of internal medicine residency training. Curricular milestones are specialty specific. For internal medicine and there are 143. The curricular milestones for internal medicine can be viewed on the [ABIM Website](http://www.abim.org).

**Reporting (or Educational) Internal Medicine Milestones**
The reporting milestones are organized by ACGME competency domains and are broken down into 22 subcompetencies. Each subcompetency consists of behaviors describing the development of competence from that of an early learner up to and beyond that expected for unsupervised practice. These descriptions constitute the reporting milestones for that subcompetency. These milestones provide narrative descriptions of the trainee and are “context free”. They describe the learner independent of the learning environment and do not describe the post-graduate year of education. For each reporting period, programs will need to review the milestones and identify those milestones that best describe a resident’s current performance and ultimately select a box that best represents the summary performance for that sub-competency (See the figure on page v.). Selecting a response box in the middle of a column implies that the resident has substantially demonstrated those milestones, as well as some milestones in the lower column. Selecting a response box on a line in between columns indicates that milestones in the lower columns have been substantially demonstrated, as well as some milestones in the higher column.

**Next Accreditation System (NAS)**
The NAS was implemented in July 2013 and designed in order to enhance the ability of the peer-review system to prepare physicians for practice in the 21st century, to accelerate the ACGME’s movement toward accreditation on the basis of educational outcomes, and to reduce the burden associated with the current structure and process-based approach. The NAS moves the ACGME from an episodic “biopsy” model (in which compliance is assessed every 4 to 5 years for most programs) to annual data collection. Each review committee will perform an annual evaluation of trends in key performance measurements and will extend the period between scheduled accreditation visits to 10 years. In addition to the milestones, other data elements for annual surveillance include the ACGME resident and faculty surveys and operative and case-log data.
The NAS will eliminate the program information form, which is currently prepared before a site visit to describe compliance with the requirements. Programs will conduct a self-study before the 10-year site visit, similar to what is done by other educational accreditors. Read more about the NAS on the ACGME Website.

Outcome
Something that follows as a result or consequence.

Performance criteria
New: An explicit description of measurable behaviors that indicate an individual has achieved a certain performance level.

Performance framework
A set of performance levels and criteria associated with a competency framework.

Performance level
A specific level within a hierarchy (e.g. novice to master) defined by measurable behaviors (performance criteria) related to a specific task or competency. The level of performance refers to an individual and generally determines the level of supervision required. Levels are ordinal data; that is, there is an order to the performance levels of a competency.

Note: The following terms have been eliminated from the above glossary as they are incorporated into other terms or not broadly used in the literature:

a) Landmark
b) Sub-competency

Scholarly Activity
An opportunity for residents/fellows and faculty to participate in research, as well as organized clinical discussions, rounds, journal clubs, and conferences. In addition, some members of the faculty should also demonstrate scholarship through one or more of the following: peer-reviewed funding; publication of original research or review articles in peer-reviewed journals or chapters in textbooks; publication or presentation of case reports or clinical series at local, regional, or national professional and scientific society meetings; or participation in national committees or educational organizations.

References
2. Proposed definition from MedBiquitous Competencies Working Group