

Competence by Design (CBD)

Frequently Asked Questions Part 3: Terms and their Uses

As you begin to use the Competence by Design (CBD) approach for teaching and assessment in your program, you will encounter a number of new terms associated with competency-based medical education and CBD. This document is part 3 of a 3 part series and includes definitions of key CBME words which will provide you and your colleagues with a common lexicon for the changes ahead as well as some guidance on how these terms may apply to your daily education practice.

| Term | Definition | How does this apply to daily practice? |
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| Competency-based medical education (CBME) | Competency-based medical education (CBME) is an outcomes-based approach to the design, implementation, assessment and evaluation of a medical education program using an organizing framework of competencies. The competencies taught and learned are based on the abilities needed to practice ^a . | CBME is an approach to medical education that focuses on learning the 'outcomes' or the abilities needed to practice. CBME also involves designing training with an explicit progression of expertise, from novice to expert. |
| Competence by Design (CBD) | Competence by Design (CBD) is the Royal College's multi-year transformational change initiative aimed at implementing a CBME approach to residency training and specialty practice in Canada. | CBD is a version of CBME for Canadian specialist education and practice. CBD is a "hybrid" in that it uses a competency-based approach, but in the context of the existing system. |
| Competence Continuum (see stages below) | The Royal College's Competence Continuum breaks down specialist medical education into a series of integrated stages, from the beginning of residency through practice ^b . | This concept divides specialty and subspecialty training into four stages: a transition to the discipline, a foundation period, a longer core period of training and, finally, a transition to practice. These stages replace PGYs in every Royal College specialty and subspecialty in CBD. A resident will be promoted from one stage to the next after they have demonstrated competence as defined for that stage (EPAs and milestones). |

| 1. Transition to discipline (first stage of the residency phase) | This stage emphasizes the orientation and assessment of new trainees arriving from different medical schools and programs (including outside Canada). | While this stage does exist in some form in many residency programs, CBD will formalize the assessment and orientation process, ensuring a level playing field for residents as they begin their specialist training. This stage may be one hour, one day, one month or more, and may include approaches such as 'boot camps'. This stage corresponds to the early part of Junior Resident currently used within the existing education model. |
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| 2. Foundations of discipline (second stage of the residency phase) | This stage covers broad-based competencies that every trainee must acquire before moving on to more advanced, discipline-specific competencies. | The trainee may complete a number of training experiences in different clinical settings to acquire a breadth of foundational abilities to prepare for core training. This stage roughly corresponds with Junior Resident. |
| 3. Core of discipline (third stage of the residency phase) | This stage covers the essential competencies that constitute the core of a discipline. | This stage roughly corresponds with Senior Resident. As part of CBD, the Royal College is exploring moving the exam to the end of this stage. |
| 4. Transition to practice (fourth stage of the residency phase) | In this stage, the senior trainee demonstrates readiness for autonomous practice. | Dependent upon context and complexity, resident activities may mimic actual practice and are performed almost independently, often with only distant/indirect supervision. Royal College certification will not be granted until the successful completion of the "transition to practice" stage. |
| Competence | Competence is the array of abilities across multiple domains or aspects of physician performance. Competence is both conditional on, and constrained by, each physician's practice context, is dynamic and continually changes over time. | Competence is the ability to do all of the tasks of practice effectively and consistently, adapting to contextual and situational needs. The tasks often incorporate abilities from multiple areas (domains) or CanMEDS Roles. |
| Competent | Competent means possessing the required abilities in all domains (areas) in a certain context at a defined stage of medical education or practice. | Competent is the point where an individual has acquired the knowledge, skills and behaviours needed to perform a task on their own. |

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| Competency | A competency is an observable ability of a health care professional that develops through stages of expertise from novice to master clinician. | A resident's promotion from one stage to the next in the competence continuum will occur when they are deemed competent in the competencies defined for that stage. Competencies are the things an individual needs to learn to do. A resident who is new to a program might exhibit a competency in a controlled setting (role play, simulation) whereas a more senior resident may exhibit the competency in |
| Milestones | A milestone is the expected ability of a health care professional at a stage of expertise. CanMEDS milestones illustrate the expected progression of competence from novice to mastery associated with each enabling CanMEDS competency. Each milestone is an observable marker of a person's ability along a developmental continuum. In the context of CBD, milestones are used for planning, teaching and assessment. | a complex practice setting. A descriptor of the level of ability in a competency, at a certain stage 'Where the learner is at.' For each aspect or domain of competence, there is a spectrum of ability from novice to mastery. At any given point in time, and in a given context, an individual physician will reflect greater or lesser ability in each domain. Milestones are more detailed than competencies and are clear descriptions with explicit statements. They are observable so can be linked to feedback. Milestones are the organizing |
| Entrustable Professional Activity (EPA) | A key task of a discipline (profession, specialty, or subspecialty) that an individual can be trusted to perform without direct supervision in a given health care context, once sufficient competence has been demonstrated. ^c | framework for the curriculum. An EPA is a statement about a task of a discipline that you trust a learner to do without direct supervision. EPAs usually contain a number of milestones. There are a small number of EPAs for each discipline. On a specific training experience a resident will be assigned a number of EPAs on |

| | | which to focus their learning, and which will be the focus of assessment. If the EPA is not attained, the supervisor can 'deconstruct' it into component milestones to see where the problem lies, and to provide specific feedback. |
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| Royal College Entrustable Professional Activity (RC EPA) | RCEPAs refer to the tasks of a discipline that may be delegated to a trainee once competence in that task has been demonstrated. An RCEPA is linked to a specific stage of the competence continuum and integrate multiple CanMEDS milestones from various CanMEDS Roles relevant to that stage. As resident's progress through the stages, the RCEPAs become progressively more complex reflecting the resident's achievement of more complex milestones. Royal College EPAs allow for authentic, work-based assessment that is targeted at the daily tasks of physicians'. Within CBD, RCEPAs are used for overall assessment. Teachers can observe (directly or indirectly) and assess these activities in the workplace. | RC EPAs play a major role in the teaching, learning and assessment that occurs in the clinical workplace in Canada. RCEPAs and their component milestones help the learner focus on learning from their experiences and help supervisors coach them on their performance. |
| Training experience | Training experiences include both mandatory and recommended training activities, which support a resident's acquisition of competence. These activities can include, for example: clinical care such as inpatient care, ambulatory clinics, performing technical procedures; or extra-clinical activities (e.g. simulation exercises, scholarly projects, journal clubs, etc.). | A training experience replaces the 'rotation' in the traditional residency education modelit's the activity or setting in which the trainee has the experiences that allows them to achieve competence in their EPAs. Each discipline will have a document called Training Experiences which sets the national standard for the required, and possibly also recommended or even optional, training experiences in the specialty or subspecialty. |

^a Medical Teacher has dedicated a full issue on the International and Canadian research on, and development of, competency-based medical education (August 2010, vol 32, no 8) http://www.royalcollege.ca/rcsite/documents/cbd/cbd-competence-continuum-diagram-legal-e.pdf



^c ICBME Collaborators Working Definition (2016).