

Competency-Based Medical Education in Family Medicine

What is it and Why Now?

What is Competency-Based Medical Education (CBME)?ⁱ

- A framework for the design and delivery of medical education that is fundamentally oriented to graduate outcome abilities and organized around competencies derived from an analysis of societal and patient needs.
- CBME approaches education from a longitudinal developmental mindset that emphasizes mastery and expertise rather than length of experience.
- CBME identifies outcomes that are desired for the learner, then describes the competencies the learner needs to demonstrate to show they have met the outcomes.
- Instead of using a fixed-time approach to meet learning objectives, CBME considers how long it will take for an individual learner to reach a desired outcome.

Why is it imperative that graduate medical education change to a competency-based medical education framework now?

- “Despite ubiquitous rhetoric of ‘innovation and transformation,’ the outcomes of health care in the United States are getting worse, with declining life expectancy, worse outcomes across all ages and most diseases and...health disparities,”ⁱⁱ
- CBME is a framework that can address the outcomes that are being urgently sought in GME.

Benefits of Competency-Based Medical Education in Family Medicineⁱⁱⁱ

- Explicitly places the patient, family and community at the center of training by preparing physicians to serve patients and communities
- Encourages accountability, flexibility, and learner-centeredness
- Focuses on the application of knowledge, not just its acquisition
- Prioritizes residents as active agents in the learning process
- Acknowledges that residents develop skills and abilities at different speeds
- Builds on residents’ talents and abilities
- Supports the development of adaptable, life-long learning skills

Key Concepts in Competency-Based Medical Education:

1) Definitions

- a. Competence – mastery in multiple areas of clinical skills, within the context of and specific to stage of medical education or practice, this considers the transition to independent practice (Consider the Core Outcomes of Family Medicine).
- b. Competencies – specific observable clinical skills and attitudes of the physician in the domains of competence that can be measured and assessed. Competencies incorporate

the specific components that illustrate a learner's progression towards competence. (Consider the ACGME Competencies, Subcompetencies, and Milestones).

- c. Entrustment- a judgement on the level of responsibility/supervision needed for specific skills

2) Five Core Components of CBME^{iv}

- a. An outcomes-based competency framework
- b. Progressive sequencing of competencies
- c. Learning experiences tailored to the competencies in CBME
 - i. Time/number not the driver
 - ii. Tied to ability and entrustment
 - iii. Flexibility for individual progression
- d. Teaching tailored to competencies
 - i. Responsive to individual needs
 - ii. Learners actively engaged
 - iii. Coaching model used
- e. System of assessment in place
 - i. Multi-source and multi-assessor, rooted in direct observation
 - ii. Attention to bias
 - iii. System for decision making with progression based on entrustment

3) Important Elements of Competency-Based Medical Education

- a. Multi-source and multi-assessor assessment with direct observation
- b. Coaching and reflection
- c. Goal-setting and deliberate practice
- d. Flexible and adaptable learning experiences
- e. Self-regulated and self-directed learning
- f. Time as a resource for instruction and skill development

Considerations for Implementing Competency-Based Medical Education

CBME is a tool and programs need skills to use it. Faculty will need faculty development.

- Competency-based assessment takes time to accomplish so faculty will need adequate time for meaningful assessments to be completed.
- Residents will need training to develop the mindset of a master-adaptive learner using reflection, self-assessment, and goal setting.

ⁱ Frank JR, Mungroo R, Ahmad Y, Wang M, De Rossi S, Horsley T. Toward a definition of competency-based education in medicine: a systematic review of published definitions. *Med Teach*. 2010;32(8):631-7.

ⁱⁱNewton W, Cagno CK, Hoekzema GS and Edje L. Core Outcomes of Residency Training 2022 (Provisional). *Ann Fam Med*. 2023;21(2):191-194

ⁱⁱⁱHolmboe ES. The Transformational Path Ahead: Competency-Based Medical Education in Family Medicine. *Fam Med*. 2021;53(7):583-589

^{iv} Van Melle E, Frank JR, Holmboe ES, Dagnone D, Stockley D, Sherbino J; International Competency-based Medical Education Collaborators. A Core Components Framework for Evaluating Implementation of Competency-Based Medical Education Programs. *Acad Med*. 2019 Jul;94(7):1002-1009.