

Competency-based medical education (CBME) is a conceptual framework that supports physician development during medical school, residency, and independent practice. CBME acknowledges the time needed to develop professional knowledge and skills varies by learner. Using a CBME framework helps focus the design and delivery of residency curriculum and resident assessment on ensuring residents gain competence in the broad scope of practice of family medicine needed by the US health care system.

CBME-based curricular design includes organizing instructional and assessment methods around **developing professional abilities**, using curricular components that build upon each other.

This paradigm places the patient, family, and community at the center of residency training by:

- Enhancing the likelihood that the graduating resident can provide safe and effective patient centered care;
- Affording residents to tailor their residency experience to align with their evolving developmental needs, future practice setting, and professional goals; and
- Promoting a collaborative educational relationship between faculty and residents.

CBME emphasizes attaining mastery of skills (outcomes) instead of time spent in a specific learning experience.

By participating as active agents in the learning process with accountability as the outcome, residents develop the skills necessary for lifelong adaptive learning.

Successful implementation of CBME in family medicine residency programs requires interwoven elements that complement and/or build upon each other. These elements can interact in the following ways:

1

Institutional support, protected time, and development of faculty, residents, and support staff: developing a shared mental model of program expectations through a dedicated longitudinal program provides training in educational and assessment techniques. With sufficient protected time, institutional leadership can better support the time-consuming cultural change to CBME.

2

Learner assessment, individualized learning plans (ILPs), educational portfolios: Implementation of direct observation and multisource assessment helps evaluators provide timely, meaningful, relevant, and personalized feedback to residents. Direct observation is an opportunity to, in real time, see and document how well residents are applying their skills. Residents should meet regularly with their advisors to develop successive ILP's and use feedback to identify learning needs, define professional goals, and create specific, measurable, achievable, realistic and time-bound (SMART) objectives to reach these goals. In a portfolio, a resident presents from a variety of resources the examples that best demonstrate their competence, resulting in a holistic view of the resident's knowledge, skills, and attitudes.

3

Supporting the master adaptive learner with coaching and the growth mindset: coaching with the use of targeted questions that start with "what," "when," and "how" assists residents in reflecting on their developmental needs and aligning their personal goals and interests with graduation requirements. A robust growth mindset supports learners through the cyclical process of setting goals, practicing skills, and making mistakes while developing professional abilities. Faculty and staff who model this reflective, self-compassionate habit create a supportive culture in which everyone in the program is challenged to change and adapt to constantly evolving situations and meet desired outcomes.

More information on implementing CBME in residency programs can be found in the STFM CBME toolkit: stfm.org/teachingresources/resources/cbme-toolkit/cbme-toolkit

References:

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2. Cutrer WB, Pusic M, Gruppen LD, Hammoud MM, Santen SA. *The Master Adaptive Learner*. Elsevier; 2020.
3. Frank JR, Snell LS, Ten Cate O, et al. Competency-based medical education: theory to practice. *Med Teach*. 2010;32:638-645
4. Holmboe ES. The Transformational path ahead: competency-based medical education in family medicine. *Fam Med*. 2021;53(7):583-589
5. Lockyer J, Carraccio C, Chan MK; ICBME collaborators. Core principles of assessment in competency-based medical education. *Med Teach*. 2017;39(6):609-616.