

Competency-Based Medical Education in Undergraduate Medical Education

Issue:

Despite pervasive interest in competency-based medical education (CBME) across the medical education continuum, implementation with fidelity is challenging. Collaborative approaches are needed to define best practices, strategically address the perception of resource intensity, promote a culture supportive of continual development and develop innovative approaches to assessment, data collection and meaningful analytics.

Background:

An international educator collaborative to advance CBME published a series of manuscripts in 2010 in the journal *Medical Teacher* outlining core concepts and issues. Frank et al. defined CBME as “an approach to preparing physicians for practice that is fundamentally oriented to graduate outcome abilities and organized around competencies derived from an analysis of societal and patient needs. It de-emphasizes time-based training and promises greater accountability, flexibility, and learner-centeredness.”

In the U.S., graduate medical education initiated a focus on CBME in 1999 when the Accreditation Council for Graduate Medical Education (ACGME) and American Board of Medical Specialties (ABMS) collaborated to define six core competencies. That work advanced to the ACGME Milestones Project, which outlined typical developmental steps to competency attainment and required educational programs to report cohort progress. Seeking alignment, some medical schools began incorporating competency and milestones based upon the ACGME competencies. In 2014, the Association of American Medical Colleges published the [Core Entrustable Professional Activities](#) for Entering Residency (Core EPAs), based upon the work in GME of Olle ten Cate of the Netherlands, and launched a national pilot to support implementation by medical schools.

In 2013, the AMA Council on Medical Education formed a Competency Alignment Task Force to review and disseminate information about the current state of CBME across the medical education continuum and into practice. The overarching goal of the Task Force was to seek opportunities to accelerate change in medical education curriculum, pedagogy and competency-based learning. The Council on Medical Education shared the findings of the task force in their 2014 report, “Competency-based Medical Education Across the Continuum of Education and Practice ([CME 3-A-14](#)).”

The AMA launched the "Accelerating Change in Medical Education" initiative in 2014 and brought together medical schools funded by AMA grants into the Accelerating Change in Medical Education Consortium. Now called “ChangeMedEd®,” this initiative and consortium works across the continuum with visionary partners to create bold innovations. The implementation of CBME and personalized learning pathways has been one theme of that collaborative work. *Medical Teacher* published an [overview](#) of the AMA consortium’s efforts in 2021 (Lomis et al.) and emphasized the need to address cultural and structural challenges to support fidelity in CBME implementation and a truly developmental model to determine the best path for each student to move to the next level of training. Historical normative approaches, which rank students or trainees against one another, are entrenched in the medical culture but have proven to be inaccurate, often irrelevant, and inequitable (Teherani et al). CBME offers an opportunity to enhance equity in assessment by articulating specific criteria for performance and emphasizing the need for continual development of every team member in an ongoing pursuit of excellence across multiple domains. CBME more explicitly acknowledges various strengths that individuals bring to the profession, which can enhance inclusion. CBME brings to medical education a growth mindset compared to the deficit mindset that often informs normative assessment. While CBME alone does not guarantee equity in assessment, it may offer a substantial contribution towards fulfilling that goal.

Little has been done to embed CBME approaches meaningfully in continuing professional development, however the ABMS has established a collaborative with the ACGME to support a CBME Learning Community which will host its second symposium in 2023. In September 2022, ChangeMedEd® hosted a [webinar](#) entitled “Competency-based assessment across the medical education continuum” to address more recent innovations in CBME. As efforts continue to advance CBME across programs, collaborative approaches are needed to provide systemic alignment across the educational continuum, address the challenges in the medical education environment, promote advances in assessment and define best practices. AMA staff members are involved in all of the efforts mentioned above.

Potential Strategies:

- Continue the work of ChangeMedEd® and its consortium
- Encourage publication of advancements and best practices in CBME
- Support shifting of resources toward equitable assessment of performance
- Promote a systems perspective to reexamine investments in resources across this education continuum
- Collaborate with organizations responsible for oversight of medical education at all levels to generate alignment of competency language and expectations and support a true continuum of development
- Promote the concept of precision education, which leverages data and technology to advance efforts already underway in medical education to promote a true continuum of competency development

Moving Forward:

The AMA is very committed to CBME. According to AMA Policy [D-295.317](#), Competency Based Medical Education Across the Continuum of Education and Practice:

1. Our AMA Council on Medical Education will continue to study and identify challenges and opportunities and critical stakeholders in achieving a competency-based curriculum across the medical education continuum and other health professions that provides significant value to those participating in these curricula and their patients.
2. Our AMA Council on Medical Education will work to establish a framework of consistent vocabulary and definitions across the continuum of health sciences education that will facilitate competency-based curriculum, andragogy and assessment implementation.
3. Our AMA will continue to explore, with the Accelerating Change in Medical Education initiative and with other stakeholder organizations, the implications of shifting from time-based to competency-based medical education on residents' compensation and lifetime earnings.

Additional AMA policies that support advancements in undergraduate medical education include:

- [D-295.318](#) Competency-Based Portfolio Assessment of Medical Students
- [D-200.985](#) Strategies for Enhancing Diversity in the Physician Workforce
- [H-295.995](#) Recommendations for Future Directions for Medical Education

AMA Resources:

- [ChangeMedEd](#)
- [Council on Medical Education](#)
- [Policy Finder](#)
- [Health Care Advocacy](#)