DEFINITION OF THE IDEAL MEDICAL EDUCATION CONTINUUM

In order to provide a framework, this report begins with a description of an ideal medical education continuum that would support a learner’s acquisition of the professional attributes—knowledge, skills, attitudes and behaviors—that are characteristic of a physician. In the ideal continuum, these attributes are organized as outcome-based competencies. As the learner moves along the educational continuum from premedical education, through medical school and residency training, and into practice, he or she is able to demonstrate these competencies at increasingly high levels of accomplishment that are appropriate to his or her level of training. For each of the competencies, benchmarks exist that allow a determination that the learner is ready to move from one phase of training to the next and, ultimately, into practice.

This ideal continuum requires significant cooperation across the phases of training to create and implement the following:

- Agreed-upon outcome-based competencies,
- Benchmarks for progression, and
- A process and tools for education and assessment across phases of the continuum that support an orderly and timely progression of the learner.

In the ideal continuum, there is coordination of the processes for both the accreditation of educational programs and the assessment of learners that supports this orderly progression of learners. Accreditation ensures that educational programs at each phase of the continuum teach to the competencies at an appropriate level and in an appropriate sequence. Assessment determines if the learner has achieved the relevant outcomes at a level appropriate to his or her phase of training.

PURPOSE AND SCOPE OF THIS REPORT

This report on accreditation alignment is the first in a series. It specifically examines the extent to which the current processes for accreditation are designed to facilitate an ideal medical education continuum. This report will focus on accreditation of undergraduate medical education (education leading to the MD or DO degree) and graduate medical education (residency training). A subsequent report will review assessment across the continuum as reflected in continuing medical education and in the processes for licensure and certification/maintenance of certification.
THE DEFINITION OF ACCREDITATION

Accreditation is the evaluation of institutions or programs using a defined set of standards. The assumptions implicit in this definition, which are reflected in current practice in the United States, are that these standards are agreed-upon by stakeholders, measurable, and related to the quality of both the educational process and its outcomes.

Distinction between Accreditation and Assessment

Accreditation ensures that learners have the opportunity to acquire the desired knowledge and skills (i.e., achieve the defined competencies) by setting requirements related to teaching and learning. Accreditation does not, however, ensure that any given learner has mastered these knowledge and skill competencies. Assessment in education is defined as the act of making a judgment about an individual’s competencies. Through the use of relevant methods, assessment determines if the specified competencies have been acquired by a given learner.

A program may be accredited even if one or more learners do not meet school or accreditor-specified competencies as judged by internal or external methods of assessment. For example, the accreditation standards of the Liaison Committee on Medical Education (LCME), the accrediting body for educational programs leading to the MD degree, include a standard that states:

A medical education program must collect and use a variety of outcome data, including national norms of accomplishment, to demonstrate the extent to which its educational program objectives are being met. (standard ED-46)1

To determine compliance with this standard the LCME reviews whether a medical school uses outcome data, such as performance on internal examinations that test knowledge and skills and USMLE performance, and considers the results in aggregate across a given medical school class or the student body as a whole. Accreditation does not typically review results at the level of the individual learner. The medical school itself sets the requirements for performance on both internal and external assessments. For example, a medical school may require a student to pass internal examinations and Steps 1 and 2 of the United States Medical Licensing Examination to progress through the curriculum and/or graduate.

THE CURRENT ACCREDITATION PROCESSES FOR UNDERGRADUATE AND GRADUATE MEDICAL EDUCATION

This section provides an overview of how educational programs across the continuum are accredited and summarizes the similarities and differences in the ideal model of the continuum.

Historical Overview

Accreditation of educational programs across the levels of the continuum has evolved separately and is represented by distinct organizations and processes (see Figure 1). Colleges and universities that sponsor baccalaureate programs are accredited by one of six regional accrediting bodies, each of which is responsible for institutions in a defined group of states. Each of the regional accrediting bodies has its own standards and processes. The accreditation of colleges and universities by regional accrediting bodies began with the formation of the New England Association of Colleges and Schools in 1885.2
The accreditation of medical education leading to the MD degree (allopathic medical education) began in the early twentieth century with separate accreditation by the American Medical Association Council on Medical Education (AMA CME) and the Association of American Medical Colleges (AAMC). The AMA and the AAMC formed the LCME in 1942, with representation from both organizations. The accreditation of colleges of osteopathic medicine, based in the American Osteopathic Association (AOA), began in 1903 and currently is the responsibility of the Commission on Osteopathic College Accreditation (COCA). Both LCME and COCA standards have evolved independently over time.

Accreditation of allopathic graduate medical education began with a review of hospitals for internship training by the AMA in 1919, with a set of “Essentials for Approved Internships” (standards) approved in 1927. The standards for and approval of residency programs began in 1928. In 1975, the Liaison Committee on Graduate Medical Education (LCGME) was formed which included the AMA, the AAMC, the American Board of Medical Specialties, the American Hospital Association, and the Council for Medical Specialty Societies. The LCGME was replaced by the Accreditation Council for Graduate Medical Education (ACGME) in 1981. Accreditation of osteopathic graduate medical education has been the responsibility of the AOA through its Bureau of Osteopathic Education. The March 2014 announcement of an agreement between the ACGME, the AOA, and the American Association of Colleges of Osteopathic Medicine to move osteopathic graduate medical education accreditation under the auspices of an expanded ACGME will bring this phase of the continuum into alignment, with the AOA ceasing accreditation of GME programs on or before June 2020.

There is movement of learners between the allopathic (MD-granting) and osteopathic (DO-granting) educational pathways. Medical students may transfer between COCA and LCME-accredited medical education programs, under specified circumstances. Graduates of osteopathic medical colleges may enter ACGME-accredited residency programs. For example, of all residents enrolled in ACGME-accredited and in combined specialty graduate medical education programs in 2012, 8% were graduates of osteopathic medical colleges.

Similarities and Differences in the Accreditation of Undergraduate and Graduate Medical Education Programs and Institutions

There are overarching similarities in the processes for accreditation of undergraduate and graduate medical education programs and institutions. All utilize defined standards, require programs to provide evidence of compliance with standards, conduct surveys to review the evidence for compliance, and utilize a peer decision-making process to determine accreditation status. However, each accrediting body functions according to its own processes and timelines.

Complexities Due to Timing of Accreditation Reviews

Allopathic and osteopathic medical education programs exist in colleges and universities accredited by one of the six regional (institutional) accrediting bodies. As a consequence, a given medical school may be preparing for an LCME or COCA review in a timeframe that differs from the accreditation review of its sponsoring university. More difficulty exists when the two reviews occur in close temporal proximity, as the medical school is expending considerable effort to prepare for both review processes. Similarly, the accreditation of an allopathic medical education program occurs in a distinct timeframe and using a distinct process versus the graduate medical education programs sponsored by the same institution. For example, LCME reviews occur on a fixed eight-year cycle while ACGME institutional reviews occur on a one-to-six-year cycle.
Complexities Due to the Content and Interpretation of Accreditation Standards

As noted, accreditation standards have been independently developed and revised by each accrediting body. There currently are differences in standards, including areas that are covered in the standards of one accrediting body but not others and/or that have a different emphasis.

Some similarities exist that touch on elements of the ideal continuum. For example:

- The COCA and LCME standards both address the need for undergraduate medical education programs to evaluate learner outcomes and track these into the next phase of training (COCA standard 6.6, LCME standard ED-46).\(^1\) The ACGME institutional requirements state the expectation that programs provide educational experiences for resident physicians that lead to measurable achievement of educational outcomes based in the ACGME competencies (ACGME Institutional Requirements II.E.1).\(^8\) The AOA Common Institutional and Program Requirements for residency training address a Core Competency Plan (V A 5.1g).\(^9\)

- As medical students and residents share a common clinical learning environment, both the LCME and the ACGME have standards that require policies related to learner harassment and abuse (LCME standard MS-32, ACGME institutional requirement II.D.4.m).\(^1,8\) The COCA standards address this issue through requiring a comprehensive ethics statement with guidelines for student interaction with faculty, administrators, and staff (COCA standard 4.7).\(^3\)

FACTORS THAT COULD ENHANCE ALIGNMENT

Alignment of accreditation across the continuum has been recognized as a potentially necessary step to bring about desired changes in the process and outcomes of medical education. For example, the Future of Medical Education in Canada reports on MD education and postgraduate education (residency training) both include the realignment of accreditation standards as major enabling recommendations.\(^10,11\) The potential to carry out such recommendations in the United States is supported by several emerging factors.

Stakeholder Expectations

There is a perception that graduating medical students are not adequately prepared to enter residency training and that residents are not prepared for the practice environment.\(^12\) Such concerns need to be clarified and questions that will help address any gaps need to be answered:

- What are the specific gaps in preparation?
- What educational or other types of interventions at what phase of the continuum could address the problems?

For example, a common set of outcome competencies that learners are expected to achieve at each transition point in the educational continuum would be helpful.

The Definition of Core Competencies

The six competency domains articulated by the ACGME (patient care and procedural skills, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice) and the American Board of Medical Specialties
were introduced in 1999\textsuperscript{13} and are included in the ACGME Common Program Requirements that all programs must address.\textsuperscript{14} They have been widely accepted as a way to ensure that residency training introduces learners to and assesses learners on key domains of clinical competence. The six competencies have been widely adopted and adapted by allopathic medical schools, based in part on the LCME accreditation standard that states:

The objectives of a medical education program must be stated in outcome-based terms that allow assessment of student progress in developing the competencies that the profession and the public expect of a physician. (standard ED-1-A)\textsuperscript{1}

The language of the competencies supports alignment by providing an organizing framework for educational program outcomes across the phases of the continuum.

The Creation of Milestones of Learner Achievement

The ACGME is in the process of implementing the Next Accreditation System (NAS) as a means to move from an episodic review of compliance to a more continuous quality enhancement model. As part of the NAS, specialty-specific milestones have been created for the six competencies which reflect “a logical trajectory of professional development” and provide a framework for the assessment of residents as they proceed through the program.\textsuperscript{13}

The milestones provide a mechanism for graduate medical education to articulate with undergraduate medical education. That is, medical schools can use the milestones for the entering resident to create graduation competencies for medical students. For example, the AAMC has created a draft set of 13 “Core Entrustable Professional Activities for Entering Residency” (EPAs). These are sets of psychomotor and cognitive skills for medical students linked to the six ACGME domains of competence. Selected examples include: gather a history and perform a physical examination, develop a prioritized differential diagnosis and select a working diagnosis following a patient encounter, participate as a contributing and integrated member of an interprofessional team, and obtain informed consent for tests and/or procedures that a “day 1” intern is expected to perform or order without supervision. As with the milestones, the EPAs include defined levels of performance that can be used to assess if the learner can be “trusted” to appropriately perform the activity.\textsuperscript{15} The November 2013 draft of the EPA plan was open for comment as of the spring of 2014.

Tools to Facilitate Tracking of Learner Accomplishment Across the Continuum

Tools to record the performance, and often the self-perceptions, of learners are becoming more available. For example, portfolios are being used both in medical schools and in residency programs.\textsuperscript{16} Typically, such portfolios currently are limited to only one phase of training. The technology exists to create a portfolio that follows learners across the educational continuum. Such tools could be used by learners and mentors to track growth related to the core competencies.

THE ROLE OF ACCREDITATION

Each of the factors acting to support alignment could be facilitated by enhancements to accreditation standards and processes. These changes, however, cannot be made by one accrediting body alone. As described, the ideal medical education continuum requires feedback from one phase of the continuum to the previous one. For example, medical schools could use information about medical student performance to inform premedical students and their advisors about needed knowledge, skills, attitudes and behaviors that would support success. Similarly, using medical school graduation competencies and the ACGME milestones as a starting point, it should be
possible to develop an agreed-upon set of expectations of what learners should know and be able to do as they move from medical school to residency training and from residency training into practice. These expectations could be codified in the standards of each accrediting body.

AMA POLICY ON ACCREDITATION

AMA policy focuses on the role of accreditation in ensuring educational quality (H-310.997[1]). Accreditation standards should address the knowledge, skills, attitudes and behaviors that the learner (in the case of this policy, the resident physician) should have on completing his or her education (H-310.929[2]). Accreditation standards at the undergraduate or graduate medical education levels should require that programs increase attention to specific topics in the curriculum, for example women’s health (H-295.890[7]), professionalism (D-295.954[1]), and education in health care delivery environments, such as the patient-centered medical home, that promote interest in primary care as a specialty choice (D-200.979[7]).

SUMMARY AND RECOMMENDATIONS

While each accreditation system has worked to support quality education within its own phase of the medical education continuum, the ideal model requires enhanced coordination of accreditation across the phases. Many of the elements that could support such coordination already exist. Therefore, the Council on Medical Education recommends that the following be adopted and that the remainder of this report be filed:

1. Our American Medical Association supports the concept that accreditation standards for undergraduate and graduate medical education should adopt a common competency framework that is based in the Accreditation Council for Graduate Medical Education (ACGME) competency domains. (New HOD Policy)

2. Our AMA recommends that the relevant associations, including the AMA, Association of American Medical Colleges (AAMC), American Osteopathic Association (AOA), and American Association of Colleges of Osteopathic Medicine (AACOM), along with the relevant accreditation bodies for undergraduate medical education (Liaison Committee on Medical Education, Commission on Osteopathic College Accreditation) and graduate medical education (ACGME, AOA) develop strategies to:
   a. Identify guidelines for the expected general levels of learners’ competencies as they leave medical school and enter residency training.
   b. Create a standardized method for feedback from medical school to premedical institutions and from the residency training system to medical schools about their graduates’ preparedness for entry.
   c. Identify areas where accreditation standards overlap between undergraduate and graduate medical education (e.g., standards related to the clinical learning environment) so as to facilitate coordination of data gathering and decision-making related to compliance.

All of these activities should be codified in the standards or processes of accrediting bodies. (Directive to Take Action)

3. Our AMA encourages development and implementation of accreditation standards or processes that support utilization of tools (e.g., longitudinal learner portfolios) to track learners’ progress in achieving the defined competencies across the continuum. (Directive to Take Action)

Fiscal Note: Less than $500.
REFERENCES

1. LCME Functions and Structure of a Medical School. May 2012 edition. Available at lcme.org


7. Accreditation Council for Graduate Medical Education. Available at acgme.org

8. ACGME. Institutional Requirements (effective July 1, 2007). Available at acgme.org/acgmeweb/Portals/0/irc_IRCpr07012001.pdf


10. The Future of Medical Education in Canada (FMEC): A Collective Vision for MD Education. Available at afmc.ca/fmec


14. ACGME Common Program Requirements (effective July, 1, 2011). Available at acgme.org/acgmeweb/Portals/0/Pfassets/ProgramRequirements/CPRs2013.pdf

15. AAMC. Core Entrustable Professional Activities for Entering Residency (November 2013).

ATTACHMENT

Figure 1: Accreditation of Institutions/Programs as of February 2014

<table>
<thead>
<tr>
<th>Phase of the Continuum</th>
<th>Pre medical Education (College/University)</th>
<th>Undergraduate Medical Education (Medical school)</th>
<th>Graduate Medical Education (Residency Training)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accrediting Body</td>
<td>Regional (institutional) accrediting body</td>
<td>LCME (allopathic) COCA (osteopathic)</td>
<td>ACGME AOA</td>
</tr>
<tr>
<td>Entity Accredited</td>
<td>College/university</td>
<td>Medical college/ Educational program leading to the MD/DO degree</td>
<td>Medical school/hospital-sponsored residency program</td>
</tr>
</tbody>
</table>