

HOD ACTION: Council on Medical Education Report 3 adopted as amended and the remainder of the report filed.

REPORT OF THE COUNCIL ON MEDICAL EDUCATION

CME Report 3-A-08

Subject: Physician Lifelong Learning

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Referred to: Reference Committee C
(David M. Lichtman, MD, Chair)

1 The American Medical Association *Principles of Medical Ethics*¹ states that “a physician must
2 continue to study, apply, and advance scientific knowledge....” The process by which physicians
3 keep their knowledge-base current typically is referred to as “lifelong learning.” Both the
4 profession and the public expect that physicians have the willingness and ability to engage in
5 lifelong learning.
6

7 However, the American Medical Association Initiative to Transform Medical Education (ITME)
8 identified the following gap in the educational preparation of physicians:
9

10 Physicians are not prepared (by the educational system) to develop and carry out their
11 own lifelong learning curriculum, including identifying their own learning needs and
12 establishing learning goals to meet these needs.²
13

14 This report will: (1) summarize the requirements for lifelong learning across the medical
15 education continuum; (2) discuss the possible barriers to physicians acquiring the skills and
16 engaging in the activities that characterize lifelong learning; and (3) identify a general approach
17 to addressing the barriers. This report is the first in a series that aims to summarize existing
18 research and propose solutions to better prepare physicians for ongoing self-assessment and
19 lifelong learning.
20

21 The Requirement for Lifelong Learning 22

23 It is expected that the medical education system prepare physicians-in-training to engage in
24 lifelong learning. The standards of the Liaison Committee on Medical Education (LCME), which
25 accredits educational programs leading to the MD degree, has an explicit requirement that
26

27 (T)he educational program must include instructional opportunities for active learning
28 and independent study to foster the skills necessary for lifelong learning.
29 (Standard ED-5A, *Functions and Structure of a Medical School*, June 2007 Edition).
30

31 The explanatory annotation to this standard states that methods of instruction and evaluation used
32 in courses and clerkships should provide students with the “skills to support lifelong learning,”
33 which include:
34

- 35 • self-assessment of learning needs;
- 36 • independent identification, analysis, and synthesis of relevant information; and
- 37 • assessment of whether information sources are credible.

1 The curriculum should include opportunities for students to practice these skills and they should
2 be evaluated and receive feedback of their performance (*F&S*, Standard ED-5A annotation).

3
4 The above LCME standard and its annotation provide a working definition of the skills of
5 lifelong learning. These are echoed in the General Competencies of the Accreditation Council for
6 Graduate Medical Education, as included in the Common Program Requirements (approved
7 February 2007). Under the General Competency of Practice-Based Learning and Improvement, it
8 states that “residents are expected to develop skills and habits” that would allow them “to meet
9 the following goals”:

- 10
11 • identify “strengths, deficiencies, and limits” in their knowledge and expertise;
12 • develop “learning and improvement goals”, and
13 • “identify and perform appropriate learning activities.”
14

15 As physicians move into practice, they encounter additional mandates that they continue to
16 participate in learning activities. Of the 68 state and territorial medical licensing boards, 61
17 require continuing medical education for licensure re-registration. The credits required per year
18 range from 12-50 (average 30).² In addition, Part II of the American Board of Medical
19 Specialties Maintenance of Certification process states that “physicians must participate in
20 educational and self-assessment programs that meet specialty-specific standards” of their medical
21 specialty board.³
22

23 Barriers to Lifelong Learning

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25 There appears to be a disconnect between the mandates for ongoing learning accepted by the
26 profession and expected by educational regulatory bodies and the findings of ITME. Why is this
27 the case? This section summarizes several general areas that may be barriers to attainment of the
28 goal that physicians should be prepared for and willing to participate in lifelong learning.
29

30 *Definitional Complexity*

31

32 While the expectations of medical education regulatory bodies describe lifelong learning in
33 straightforward operational terms, there is agreement in the medical education research literature
34 that the term is complex and multidimensional. A recent definition, which underscores this,
35 states that lifelong learning is a

36
37 “concept that involves a set of self-initiated activities (behavioral aspect), and
38 information seeking skills (capabilities) that are activated in individuals with a sustained
39 motivation to learn and the ability to recognize their own learning needs.”⁴
40

41 Each of the elements of the definition includes the potential for barriers.
42

43 *Skills in Self-Assessment (Recognize Learning Needs)*

44

45 The ability to assess one’s own learning needs is critical to effective lifelong learning. This
46 includes both identifying learning needs and selecting educational activities to meet these needs.
47 There is research to indicate that many physicians are not skilled in self-assessment (defined by
48 self-ratings of performance as compared with external ratings), and that the worst accuracy in
49 self-assessment is found among physicians who are the least skilled, as evaluated by external
50 raters.^{5,6} This means that some physicians are not prepared to recognize what they do not know
51 and/or cannot do.

Information Seeking Skills

Even if there is adequate and timely recognition of a learning need, education during medical school and residency training may not be providing the necessary skills to prepare physicians to seek relevant information. This includes such things as understanding the concepts behind just-in-time learning and evidence-based medicine, defined as “the integration of up-to-date patient-oriented valid research into clinical decision-making.”⁷ In the 2006 Association of American Medical Colleges Medical School Graduation Questionnaire, about 17% of the about 11,420 responding fourth-year medical students indicated that inadequate time in the curriculum was devoted to the interpretation of clinical data and research reports and about 19% that inadequate time was devoted to literature reviews/critiques. A 2007 study indicated that residents in a number of graduate medical education programs lacked the knowledge to interpret the results of published clinical research.⁸ In addition, it has been proposed that physicians may not be adequately developing the skills of information management (that is, “finding, evaluating, and using information at the point of care”).⁹ While evidence-based medicine has been described as the “basic science,” information management is the “applied science.”⁹ Physicians also may not be aware of how to access or apply evidence-based guidelines, such as from the AMA convened Physician Consortium for Performance Improvement.

In addition, evidence-based information for use in clinical practice is not uniformly easy to identify, access, and apply. Textbooks rapidly become outdated, journal articles often are specific and difficult to directly relate to clinical practice, and web-based information is voluminous and often not validated or current.

Motivation for Learning

Studies on the effectiveness of continuing medical education have found that learning sessions where participants can be active and engage in practicing skills are more likely to impact professional practice.¹¹⁻¹² One example of this type of active learning occurs in the context of the physician’s regular work (workplace learning). Workplace learning has been described as “spending a minute here or three minutes there to find answers prompted by the clinical questions and learning opportunities that come up every working day” instead of doing education at set intervals for discrete blocks of time.¹³

The workplace climate for practicing physicians has been found to be related to motivation for learning. A heavier workload tends to be associated with more fragmentation and subsequent disorganization of learning in the workplace. In a pressured work environment, which characterizes much of current medical practice, the physician is motivated by external requirements, adopts a scattered approach to learning, and perceives barriers to continuing education.¹⁰ The effect of the learning environment on the approach to learning has been identified even among medical students.¹⁰

Costs of Engaging in Lifelong Learning

Motivation for learning may be hampered by the associated actual and opportunity costs. Attendance at professional meetings requires time away from practice and may involve significant registration and travel costs. The time commitment for such traditional modes of learning is of particular concern, with increasing physician workloads, falling reimbursement, and the increase in dual-physician families.

1 Summary and Recommendations for Promoting Lifelong Learning
2

3 This report provides an initial framework for a future consideration of the barriers that impact
4 physicians' acquisition and application of the skills of lifelong learning. ITME intends to focus
5 on how these barriers can be overcome. AMA policy supports the concept that continuing
6 medical education (lifelong learning) should be integrated into undergraduate and graduate
7 medical education and that the creation of tools, such as distance learning technologies, should be
8 facilitated to support physician participation (Policy H-300.958, AMA Policy Database).
9

10 Therefore, the Council on Medical Education recommends that the following recommendations
11 be adopted and that the remainder of this report be filed.
12

- 13 1. That American Medical Association Policy H-300.958, "Support for Continuing Medical
14 Education," be reaffirmed. (Reaffirm HOD Policy)
15
- 16 2. That our AMA, through its Initiative to Transform Medical Education, study the
17 following and report back at the 2009 Annual Meeting:
 - 18 • The status of teaching the "basic science" of lifelong learning during medical
19 school and residency training, including evidence-based medicine, information
20 retrieval, and critical analysis of the literature.
 - 21 • The strategies that have been effective in teaching the skills of self-assessment
22 among physicians-in-training and in practice, and in promoting their use.
 - 23 • The patterns of utilization of the various continuing medical education (lifelong
24 learning) modalities by physicians, with the identification of those that are both
25 efficient and effective for planning, tracking, and documenting learning
26 experiences, as well as changing practice behavior.
 - 27 • The mechanisms that are effective in mitigating the actual and opportunity costs
28 of participating in lifelong learning. (Directive to Take Action)
29
- 30 3. That our AMA, based on this study, work with other relevant bodies to develop and
31 monitor the implementation of recommendations directed at the medical education
32 community, including accrediting, certifying, and licensing bodies, as well as educational
33 institutions and programs, aimed at assuring that physicians are prepared to engage in
34 lifelong learning and report the results at the 2010 Annual Meeting. (Directive to Take
35 Action)

Fiscal Note: \$7500 for staff time to engage in the proposed study, development of
recommendations, and monitoring the outcomes.

Complete references for this report are available from the Medical Education Group.