# HOD ACTION: Council on Medical Education Report 10 <u>adopted</u> and the remainder of the report <u>filed</u>.

REPORT 10 OF THE COUNCIL ON MEDICAL EDUCATION (A-15) Aligning the Evaluation of Physicians Across the Medical Education Continuum (Reference Committee C)

#### EXECUTIVE SUMMARY

American Medical Association policy (H-295.862) from the 2014 Annual Meeting of the AMA House of Delegates supports the concept that assessment of physicians across the continuum should be based in the six competency domains of the Accreditation Council for Graduate Medical Education (ACGME): patient care, medical knowledge, interpersonal and communication skills, professionalism, practice-based learning and improvement, and systems-based practice.<sup>1</sup> The current report uses this competency framework in the discussion of assessment methods.

The report describes the research on and methods used to assess knowledge and cognitive skills, clinical and communication skills, professionalism, and other competencies. While there has been less research on the reliability and validity of assessment methods for systems-based practice and practice-based learning and improvement when used for summative purposes, current methods appear useful for formative (educational) purposes.

A physician needs to understand his or her knowledge and skill gaps, so that they can be remedied through targeted education and practice. Self-assessment allows a physician to take responsibility for his or her learning and to build an ongoing educational program based on perceived needs. However, there is evidence that there are gaps in some physicians' ability to independently assess their own knowledge, skills, or performance in a global content domain.

There have been attempts to utilize assessment methods to predict the performance of physicians at later stages of the continuum, as an aid in selection. For example, the results of the Medical College Admissions Test and the United States Medical Licensing Examination are used in selection for medical school and residency training, respectively. In summary, while performance on tests of knowledge tends to predict performance on later tests of knowledge, there is far less evidence for valid measures to predict performance at later stages of the continuum in other competency domains.

There is a need to create an organizing framework that would allow assessment along the medical education continuum related to the six competency domains. Workplace based assessment allows the results of various assessment methods to be aggregated so that a picture of composite performance can be developed. The results of workplace assessment would allow a cumulative judgment about the performance of an individual at a given stage of the medical education continuum and allow a determination if he or she is ready to progress to the next year of the program or phase of the continuum.

This report recommends that evaluation of physicians as they progress along the medical education continuum should include assessments of each of the six competency domains. Additional research is needed on competency-based progression within and across phases of the medical education continuum, on innovative methods of assessment related to the six competency domains of the ACGME/American Board of Medical Specialties, and on best practices for workplace-based assessment that allow performance data related to each of the six competency domains to be aggregated and to serve as feedback to physicians-in-training and in practice.

#### REPORT OF THE COUNCIL ON MEDICAL EDUCATION

CME Report 10-A-15

	Subject:	Aligning the Evaluation of Physicians Across the Medical Education Continuum			
	Presented by:	William A. McDade, MD, Chair			
	Referred to:	Reference Committee C (Daniel B. Kimball, Jr., MD, Chair)			
1	THE IDEAL CONTINUUM				
2 3 4 5 6 7 8 9 10 11 12 13	In order to provide a framework, this report begins with a description of an ideal continuum that would allow determination of whether a medical student, resident or practicing physician has acquired and can demonstrate the competencies that characterize a physician. As the individual moves through medical school, residency training, and into practice, he or she should be able to demonstrate the knowledge, skills, attitudes and behaviors related to these competencies at levels of accomplishment that are appropriate to his or her stage of the medical education continuum. This requires that, for each of the competencies, there will be assessment methods, tools and metrics to test an individual's achievement of expected outcomes. In the ideal continuum, the methods and tools used for assessment are able to determine, and in some cases predict, the individual's level of accomplishment.				
13 14 15	The ideal contin	nuum for evaluation depends on the availability of the following:			
16 17 18 19 20	<ul><li>Performance practice; an</li><li>A process a</li></ul>	on outcome-based competencies; se benchmarks for each level of the continuum and for entry into and maintenance of ad and measurement tools to assess whether the learner can demonstrate achievement ant competencies at an appropriate level.			
21 22	PURPOSE AN	D SCOPE OF THIS REPORT			
23 24 25 26 27 28 29 30 31	Medical Educat (HOD), support on the six comp (ACGME): pati professionalism	ical Association (AMA) Policy H-295.862, Alignment of Accreditation Across the tion Continuum, adopted at the 2014 Annual Meeting of the House of Delegates ts the concept that assessment of physicians across the continuum should be based betency domains of the Accreditation Council for Graduate Medical Education tent care, medical knowledge, interpersonal and communication skills, a, practice-based learning and improvement, and systems-based practice. <sup>1</sup> The ses this competency framework in the discussion of assessment methods.			
31 32 33 34 35 36 37 38	Accreditation A aligned from m among intereste competencies a summarizes app	the second in a series. Council on Medical Education Report 4-A-14, Alignment of Across the Medical Education Continuum, discussed how accreditation could be edical school through residency. It concluded that there should be collaboration ed stakeholder groups to identify guidelines for the general level of learners' s they move from one stage of the continuum to the next. The current report proaches to evaluating physicians across the continuum from entry to medical ctice and describes the following:			

1 The methods and tools currently used to assess knowledge, skills, attitudes and behaviors • 2 relevant to competency domains during the stages of the medical education continuum. 3 The status of efforts to use assessment to predict individuals' success during training and in ٠ 4 practice. 5 • The status of and potential approaches to using a competency framework for aligning 6 assessment across the continuum. 7 8 THE DEFINITION OF ASSESSMENT AND RELATED CONCEPTS 9 10 The evaluation of physician learners across the continuum should include a variety of assessment methods to allow a judgment about an individual's attainment of specific knowledge, skills, and 11 12 behavioral and attitudinal outcomes. As described by Boulet and McKinley, assessments: 13 14 must be practical, yield sufficiently precise measures of ability, and allow one to make 15 justifiable inferences concerning the qualities or abilities of those being evaluated.<sup>2</sup> 16 Through the use of relevant assessment methods, it can be accurately and consistently determined 17 whether and at what level the expected competencies have been acquired by a given learner. 18 19 20 Validity and Reliability 21 22 The validity of an assessment tool (e.g., a multiple-choice test, a clinical skills examination) relates to whether it actually measures the "construct" (the characteristic) that it intends to measure (e.g., 23 24 professionalism).<sup>3</sup> The assessment tool needs to be tested (validated) to ensure that it is accurately measuring all the relevant components of the construct (e.g., medical knowledge). The reliability of 25 an assessment tool relates to the consistency of scores when the tool is administered repeatedly 26 within a short timeframe to the same learner.<sup>3</sup> Both reliability and validity must be considered in 27 28 determining if a given assessment tool is appropriate for the desired purpose. 29 30 Formative and Summative Assessment 31 32 *Formative* assessment is designed to provide feedback to individuals for purposes of their learning 33 and improvement. In formative assessment, the results are used by the learner for his or her own purposes and the results do not contribute to an external decision about the learner, such as 34 35 progress to the next level of training or grading. Summative assessment, in contrast, contributes to 36 final judgments, such as pass-fail decisions. The same types of assessment methods or tools may be 37 used for both formative and summative assessment, though the level of feedback to the learner will 38 differ. In formative assessment, the learner receives detailed information about his or her 39 performance, such as content areas where performance was strong or weak. In summative 40 assessment, the learner likely will receive only a score/set of subscores or a decision, such as pass 41 or fail. 42 43 OVERVIEW OF THE ASSESSMENT METHODS USED IN VARIOUS PHASES OF THE 44 EDUCATIONAL CONTINUUM 45 46 Assessment of Knowledge and Cognitive Skills 47 48 Assessment of knowledge is often done through tests using multiple-choice questions (MCQs).<sup>4</sup> 49 The MCQ format came into prominence in the 1950s. For example, the National Board of Medical Examiners engaged in statistical studies related to the validity and reliability of tests using MCOs 50

50 and found reliability and validity of the format appropriate for licensure examinations and superior

1 to methods that had been used, such as essay questions.<sup>5</sup> Today, tests using MCQs are used across

- 2 the continuum from preadmission testing (the Medical College Admission Test) through the
- 3 medical specialty board certification and re-certification examinations in the various specialties.
- The MCQ format allows a wide variety of objectives to be tested and the test to be easily scored.<sup>4</sup> However, care must be taken that questions match the expected competency that the learner should
- 5 However, care must be taken that questions match the expected competency that the learn 6 demonstrate. For example, questions that simply expect the recall of previously learned
- demonstrate. For example, questions that simply expect the recall of previously learned
   information are not appropriate when the goal is to assess higher-level skills, such as medical
- 8 reasoning or problem-solving.
- 9

10 Cognitive skills, such as problem-solving, also can be assessed through observation of the learner 11 in a classroom or workplace setting. During medical school, formats such as problem-based 12 learning allow an assessment of how well learners identify and utilize information related to 13 clinical problems. As the medical student gains more experience, he/she applies this skill in the 14 context of real patients during clerkships, where the skill is assessed through supervisor 15 observation. In medical school and residency training, cognitive skills such as clinical judgment also can be assessed through more structured observational techniques, such as case-based 16 discussion/chart stimulated recall.<sup>6</sup> In these situations, the individual is observed demonstrating 17 18 his/her thought processes related to the care of real patients. Observational assessment methods.

- 19 even under controlled conditions, require appropriate training of evaluators.<sup>6</sup>
- 20 21

#### Assessment of Clinical and Communication Skills

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Assessment of procedural skills may occur in isolation (i.e., the performance of a specific task, such as examining the abdomen or suturing) or along with assessment of cognitive skills (i.e., the performance of a physical examination with the results used by the examinee to develop a problem list or management plan). Similarly, communication skills may be assessed alone (e.g., the ability to ask open-ended questions or to put the patient at ease) or in the context of eliciting information that allows a specific diagnosis to be made.

29

30 There are a variety of assessment methods and tools that are used for the evaluation of clinical and 31 communication skills within the clinical setting. All are based on observation of performance with real patients during a single clinical encounter or cumulative over time. For example, the mini-32 33 clinical evaluation exercise (mini-CEX), developed in the 1990s, is a workplace-based single 34 encounter assessment that evaluates patient encounters in the clinical setting. It is useful for the assessment of a variety of competencies, including professionalism, interviewing/communication 35 and physical examination and allows for immediate post-encounter feedback.<sup>8,9</sup> The mini-CEX is 36 used during medical school and residency training.<sup>10</sup> In summary, many tools, such as checklists 37 and rating scales, are used during medical school and residency training to assess students, 38 residents and fellows in the clinical setting.<sup>10</sup> Often the tools are developed and used within one 39 40 medical school or residency program. According to a systematic review of the literature, few tools 41 have been "thoroughly evaluated and tested" for their reliability and validity, the mini-CEX being one exception.<sup>10</sup> 42

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44 Assessment of clinical skills also can occur in a simulated setting. The Objective Structured

45 Clinical Examination (OSCE) first was described in 1975 as a way to enhance the reliability and

46 validity of clinical skills assessment and to ensure that learners (medical students and residents) are

47 systematically observed performing core clinical skills.<sup>11,12</sup> OSCEs consist of a series of cases that

48 require the individual to elicit information through history and/or physical examination and/or to

49 use clinical information in follow-up, such as creating a differential diagnosis or management plan.

- 50 OSCEs are widely used within individual medical schools for formative or summative purposes.<sup>13</sup>
- 51 The United States Medical Licensing Examination Step 2-Clinical Skills is an OSCE-based

1 examination. In the 2013-2014 academic year, 96 percent of MD-granting medical schools required

- students to take the examination and 67 percent required a passing score for advancement or
   graduation.<sup>13</sup>
- 4
- B-----
- 5 High-fidelity simulation has been noted to be useful in assessing both technical and non-technical
- 6 skills. While there is evidence for the face validity of these measures, the evidence for their
- 7 reliability and predictive validity is not as clear.<sup>6</sup>
- 8
- 9 Methods that allow assessment of written communication skills include review of clinical 10 documentation (e.g., chart review, patient write-ups). For example, there is widespread use of clinical documentation review during required clinical clerkships.<sup>7</sup> Review of clinical records as an 11 12 assessment methodology extends into residency training and, in some cases, into clinical practice. 13 For example, in practice there could be assessment of the accuracy and adequacy of the clinical 14 record and of whether information has been shared with appropriate parties, such as patients and 15 referring physicians. There is little information in the literature about the extent to which the 16 review of physician records occurs in a systematic manner.
- 17
- 18 Assessment of Professionalism
- 19

20 Professionalism may be characterized in a variety of ways and each has implications for 21 assessment. For purposes of this report, professionalism is considered to be a "characteristic or attribute that is identifiable within individuals"<sup>14</sup> and is assessed though the observation of behavior 22 23 in actual or simulated settings. The complexity of assessing professionalism arises from the different characteristics included in the definition (e.g., altruism, integrity) by different groups and 24 the need to operationalize these characteristics into observable behaviors.<sup>14</sup> For purposes of 25 assessment, professionalism has been considered as a "global construct" (that is, a composite 26 characteristic) or as a set of individual, though perhaps related, characteristics.<sup>15</sup> 27

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Regardless of the complexities, professionalism is widely evaluated during medical school and
 residency training and also is considered during the admission process.<sup>14</sup> For example, medical
 schools use a variety of methods to assess professionalism (Table 1).

# TABLE 1: METHODS USED BY MEDICAL SCHOOLS IN THE ASSESSMENT OF PROFESSIONALISM (2012)<sup>16</sup>

# 36 37 METHOD

#### NUMBER AND % OF SCHOOLS

20				
39	Observation by clinical faculty during clerkships	134	100%	
40	Observation during small group sessions in the preclinical years	129	96%	
41	Observation by residents	126	94%	
42	Observation during laboratory sessions	118	88%	
43	OSCE with one or more professionalism stations	99	74%	
44	Comments from other health professionals	79	59%	
45	Comments from patients	55	41%	
46				

47

48 Assessment of professionalism can occur as a single point-in-time evaluation, such as the mini-

49 CEX; composite performance over time, such as in an end-of-clerkship evaluation; or a critical

50 incident, such as the reporting of an incident of unprofessional behavior.<sup>17</sup> In residency training, the

51 ACGME milestones for all specialties include an assessment of various aspects of professionalism

1 over time.<sup>1</sup> While the milestones for each specialty include an evaluation of professionalism, each

- organizes the components of professionalism (and consequently the specific behaviors evaluated)
   differently.
- 4 5

Other tools are being used to support formative and summative evaluation of professionalism.

- Portfolios are being used in medical school and residency as a means to store information from a
   variety of assessment methods, to allow the creation of a comprehensive view of the individual
- 8 over time.<sup>6</sup> The move to electronic portfolios has increased their flexibility and utility, though
- 9 security of information remains an issue.<sup>18</sup>
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- 11 Systems to Assess Multiple Competencies
- 12

While the previous discussion focused on the tools and methods typically used to assess single 13 14 competency domains, there are systems and processes in place to address the physician's 15 accomplishments across the six competency domains, including systems-based practice and practice-based learning and improvement. The ACGME milestones project includes the ongoing 16 assessment of each of the six competency domains in each specialty.<sup>1</sup> This system is designed to 17 18 monitor a resident's ongoing progress in more than 30 areas per specialty so that the graduate's readiness for unsupervised practice can be documented.<sup>1</sup> Similarly, the American Board of Medical 19 Specialties Maintenance of Certification (MOC) program addresses the six competency domains 20 using multiple methods for learning and assessment.<sup>19</sup> Such comprehensive assessment systems can 21 provide information for physicians and others to use for tracking progress along the continuum. 22 23

This report has described many tools and methods that are available to assess medical knowledge, patient care, interpersonal and communication skills, and professionalism. A variety of processes exist, such as those used by the individual medical specialty boards for Part IV of the MOC program, to assess systems-based practice and practice-based learning and improvement.<sup>34</sup> In

27 program, to assess systems-based practice and practice-based rearning and improvement. In 28 general, however, less research has been conducted to determine their reliability and validity for

- 29 summative purposes. They are able to provide useful formative feedback to individual physicians 30 and their practices.
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## 32 THE BENEFITS AND LIMITATIONS OF SELF-ASSESSMENT

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34 Physicians need to understand their knowledge and skill gaps, so that they can be remedied through targeted education and practice. Self-assessment allows physicians to take responsibility for their 35 36 learning and to build an ongoing educational program based on perceived needs. However, reviews 37 of the literature have cast doubts on physicians' ability to independently assess their own knowledge, skills, or performance in a global content domain as compared with an appropriate 38 external assessment measure.<sup>20,21</sup> In summary, self-assessment is important but insufficient in itself 39 40 to allow physicians to identify areas in which they need to improve. To address this, researchers 41 have pointed to the importance of external assessments. In addition, the creation of objective measurements or benchmarks of performance and the use of an external appraiser to facilitate self-42 assessment could be useful.<sup>20</sup> 43

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## 45 METHODS AND TOOLS TO PREDICT PERFORMANCE

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47 There has been a great deal of research on what tools/measures are useful to predict the

- 48 performance of a physician-in-training or a physician in a future phase of the continuum, including
- 49 in practice.<sup>22</sup> Some of these measures, for example, the Medical College Admission Test (MCAT)
- 50 and the United States Medical Licensing Examination (USMLE), are widely used in admission
- 51 decisions to medical school and residency programs, respectively. In summary, though, reviews of

1 the literature indicate that clinical competence is complex and that no one measure is sufficient to

2 predict overall performance after medical school graduation.<sup>22</sup> This section summarizes research

3 linking tools or measures with specific outcomes, such as future examination or clinical

4 performance. In summary, while performance on tests of knowledge tends to predict performance

5 on tests of knowledge, there is far less evidence for valid measures to predict performance at later

- 6 stages of the continuum in other competence domains.
- 7 8

Predicting Success in Medical School

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10 In their selection processes, medical schools typically rely to varying degrees on the MCAT, the 11 college grade point average (GPA) and interviews. There has been much research done on how 12 well the MCAT predicts performance during medical school. Statistical analyses reveal that the 13 MCAT score has a significant relationship to USMLE Step 1 performance (predicts about 43 percent of the variance) and a much smaller relationship to Step 2 performance (predicts about 18 14 percent of the variance).<sup>23</sup> In general, the total MCAT score has a medium predictive validity for 15 basic science course performance (19 percent of the variance) and clinical (clerkship) performance 16 17 (15 percent of the variance), and medical school grades were best predicted by a combination of MCAT scores and undergraduate GPA, though the percent of the variance explained was not 18 high.<sup>23,24</sup> These results indicate that there are other factors that influence performance in medical 19

- 20 school.
- 21

Some form of interview is used as part of the admission process to, in part, assess nonacademic 22 personal qualities and to predict nonacademic success.<sup>25</sup> Concerns have been raised, however, 23 about lack of consistency and objectivity in an unstructured interview.<sup>26</sup> To address this issue, new 24 25 formats have been created that exhibit more standardization. The multiple mini-interview (MMI) 26 uses a number of brief encounters modeled after the OSCE. As utilized by the McMaster 27 University MD program, candidates have a short period of time to respond to questions or 28 situations alone or with other applicants. All applicants experience the same scenarios. In an early study, the MMI was independently predictive of performance on the Medical Council of Canada 29 30 Qualifying Examination (MCCQE).<sup>27</sup> The MCCQE is similar to the USMLE. The MMI is a type of situational judgment test. This type of assessment has been shown to be useful to select for a 31

32 variety of nonacademic or professional attibutes.<sup>28</sup>

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34 Predicting Success in Residency Training35

36 USMLE Step 1 scores are commonly used by residency program directors to select applicants for 37 interviews.<sup>29</sup> However, USMLE performance can be influenced by a variety of factors, such as the 38 curriculum of the medical school, the assessment methods used by the school, and the clinical 39 experience of the student at the time the exam is taken.

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A review of the literature did not show a statistically significant correlation between USMLE Step
 1 and 2 scores and reliable measures of procedural and clinical skill acquisition among residents
 and fellows. There is, however, correlation between USMLE scores and the scores on MCQ-based
 medical specialty board examinations.<sup>29</sup> There also was a significant correlation between USMLE
 Step 2 scores and the scores on the in-training examination in one specialty.<sup>30</sup>

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47 Predicting Success in Practice

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49 A systematic review of the literature<sup>22</sup> found few studies of the relationship between performance

50 in the early stage of the continuum (i.e., medical school) and performance in practice. One

51 substantive area of inquiry is related to the identification of individuals who would experience

1 future adverse actions. Studies have linked behaviors in medical school and residency training 2 related to professionalism with the risk of disciplinary actions by state medical licensing boards. 3 Behaviors in medical school that were statistically related to licensing board actions were defined 4 by the authors as "severe irresponsibility" and "severely diminished capacity for self-5 improvement."<sup>31</sup> A national study of internal medicine residents found that low professionalism ratings on the Residents' Annual Evaluation Summary predicted increased risk for disciplinary 6 7 action by state medical licensing boards. The study also found that progressively increasing 8 professionalism ratings and higher scores on the American Board of Internal Medicine certification 9 examination were associated with less risk for subsequent disciplinary action.<sup>32</sup> 10 11 Clinical performance at all levels of the continuum is complex, and little is known about the relationship between performance measures early in the continuum and longer-term practice 12 outcomes.<sup>22</sup> There is a need, therefore, for a more systematic approach to study of the predictive 13 value of assessment methods and tools. 14 15 APPROACHES TO ALIGNING ASSESSMENT ACROSS THE CONTINUUM 16 17 18 What type of assessment system would allow the performance of an individual to be determined through valid and reliable means at various stages of the continuum? Based on research to date. 19 20 external assessment of clinical knowledge using "written" tests can be both predictive from one 21 stage of the continuum to the next and can have appropriate levels of reliability and validity. There 22 would be a need, however, to ensure that the test blueprint (the number of questions per content 23 area) samples appropriately from the discipline domain being tested<sup>2</sup> and that the questions are at an appropriate level for the stage of the continuum. There are methods, such the OSCEs and mini-24 25 CEX, to assess distinct cognitive and procedural skills. These also, when properly developed and administered, have appropriate statistical properties. Performance benchmarks (e.g., passing 26 27 scores) for all these could be set based on the stage of the continuum. There are many other 28 domains of clinical competence that are assessed in various ways, but these assessments tend to 29 occur in isolation and do not allow a composite picture of knowledge and skills at a given phase of 30 an individual's professional development. 31 32 *Workplace-based Assessment as an Organizing Framework* 33 34 There is a need to create an organizing framework that would allow assessment along the medical 35 education continuum related to the six competency domains. Workplace-based assessment is 36 defined as: 37 38 the assessment of working practices based on what doctors actually do in the clinical setting and predominantly carried out in the workplace itself.<sup>33</sup> 39 40 41 Workplace-based assessment can be a format for collecting and aggregating performance data from quantitative and qualitative sources about a breadth of clinical skills. As such, it can be used to 42 provide feedback about physicians' development of these skills as they progress along the 43 continuum.<sup>33</sup> The tools that typically are used for workplace-based assessment can be categorized 44 45 as: 46 • Documentation of work experience, such as patient encounter logs. 47 Observation of individual clinical encounters, such as the mini-CEX. • 48 • Discussion of individual clinical cases, such as chart stimulated recall. Feedback from peers and others on routine performance.<sup>6</sup> 49 •

1 These techniques have been described in an earlier section of this report. Workplace-based

- assessment allows the results to be aggregated so that a picture of composite performance can be
   developed.
- 4 5

#### Setting Benchmarks of Performance

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7 The results of workplace-based assessment would allow a cumulative judgment about the 8 performance of an individual at a given stage of the medical education continuum and allow a 9 determination of readiness for progression to the next year of the program or phase of the 10 continuum. How then do we know if the level of performance that is achieved is appropriate? 11 Benchmarks for individual measures, such as the passing score on a written test and an OSCE, are 12 common. However, benchmarks for the aggregate performance of an individual are not. One 13 example that has been implemented is the milestones component of the ACGME Next Accreditation System.<sup>1</sup> Residency programs will evaluate residents in each of the competency 14 15 domains at intervals and submit composite milestone data on residents to the ACGME every six months. The results of the milestone evaluations will place each resident along a performance 16 continuum for each competency domain.<sup>1</sup> While this information will be used as part of the 17 accreditation process, it is not clear how it will be used in decisions within a residency program 18 19 about progression for individual residents.

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The issue of benchmarks for progression decisions is an important one, since competency-based curricula permit the advancement/promotion of an individual within medical school and from medical school to residency that is not time-based. That is, a medical student or a resident could complete the educational program in less than the standard time if he or she meets the requirements of the program's competencies. While theoretically attractive, there is a need to set appropriate performance benchmarks to determine if the requirements have been met. This is not just a theoretical need. In the 2013-2014 academic year, 17 medical schools (12%) reported having a

28 time flexible/competency-based curriculum for all students.<sup>7</sup>

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#### SUMMARY AND RECOMMENDATIONS

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32 The goal of ensuring that physicians are knowledgeable and skilled depends on an assessment 33 system that allows both formative feedback to improve performance and summative decisions 34 based on valid and reliable measures. The system should be coordinated so that progression in knowledge and skill development can be monitored across the stages of the medical education 35 36 continuum. While there has been progress in achieving this outcome, more work is needed in two areas. One is assessment of the competency areas of systems-based practice and practice-based 37 38 learning and improvement. Another area is to move beyond the individual competency areas to 39 ensure that physicians are prepared for the complexities of medical practice. 40

The Council on Medical Education recommends that the following recommendations be adoptedand that the remainder of this report be filed.

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That our American Medical Association (AMA) support the concept that evaluation of
 physicians as they progress along the medical education continuum should include the
 following:

- 47
- a. Assessments of each of the six competency domains of patient care, medical knowledge,
   interpersonal and communication skills, professionalism, practice-based learning and
   improvement, and systems-based practice; and

1 2		b.	Use of assessment instruments and tools that are valid and reliable and appropriate for each competency domain and stage of the medical education continuum. (New HOD Policy)
3			
4	2.	That our AMA encourage study of competency-based progression within and between medical	
5		school and residency.	
6			
7		a.	Through its Accelerating Change in Medical Education initiative, our AMA should study
8			models of competency-based progression within the medical school.
9			
10		b.	Our AMA should work with the Accreditation Council for Graduate Medical Education
11			(ACGME) to study how the Milestones of the Next Accreditation System support
12			competency-based progression in residency. (Directive to Take Action)
13			
14	3.	That our AMA encourage research on innovative methods of assessment related to the six	
15		cor	npetency domains of the ACGME/American Board of Medical Specialties that would allow
16			nitoring of performance across the stages of the educational continuum. (Directive to Take
17		Action)	
18			
19	4.	Tha	at our AMA encourage ongoing research to identify best practices for workplace-based
20			essment that allow performance data related to each of the six competency domains to be
21			gregated and to serve as feedback to physicians in training and in practice. (Directive to Take
22			tion)

Fiscal Note: Less than \$500.

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