Assuring Quality of the Healthcare Practitioner Workforce: An Essential Ingredient of a High Quality Health System

POLICIES OF THE NATIONAL BOARD OF MEDICAL EXAMINERS® REGARDING HEALTH SYSTEM REFORM

Endorsed by the NBME Membership April 1, 2011
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Copyright © 2011 by National Board of Medical Examiners® (NBME®). All rights reserved.
The National Board of Medical Examiners (NBME®) has promoted quality in the health professions workforce since 1915. We seek to protect the health of the public through state-of-the-art assessment using high standards for health professionals. As an institution arising from the medical profession, we recognize each health profession’s intrinsic responsibility to regulate itself, assuring that its members fulfill their social contract with patients. Self-regulation is a core element of professionalism. We recognize that quality clinicians are only one ingredient in an effective and efficient healthcare system; a dysfunctional system can undermine the protections intended by our work in defining standards and assessing individual practitioners. Therefore, the NBME supports ongoing efforts to reform the US healthcare system. With the Patient Protection and Affordable Care Act recently signed into law, some provisions will go into effect over the next several years that align with the policies adopted by the NBME; others have difficult-to-predict interactions with these NBME policies. The NBME offers these policies as guidelines for itself and for other organizations in both the public and private sectors as we engage in efforts to continue to improve our healthcare system.

1. All Americans must have access to affordable essential healthcare. The care must be patient-centered, safe, and at least equal in quality to healthcare in other developed nations. An appropriately sized and distributed health workforce must be competent to provide these services. These are required conditions to protect the health of the public.

2. Continuing efforts at healthcare reform should support the creation of a system within the professions for defining a common framework for competence, articulating minimum standards, encouraging continuous improvement, and developing common tools for measuring competence and performance for all healthcare professionals caring for patients in the United States.

3. The public expects and deserves a system of accountability that cannot be circumvented. Licensure of health professionals by states should provide that system, holding healthcare professionals accountable throughout their careers through substantive initial and periodic renewal of professional licenses.

4. Licensed clinicians must demonstrate proficiency in all domains important to effective care, including some that have been underemphasized, including: patient-centeredness, communication, prevention, and evidence-based practice.

5. Health system reform should support state health professional licensing authorities in implementing consistent minimum standards as they grant initial professional licenses. State licensing and regulatory authorities should have responsibility for monitoring and discipline of clinicians who practice in their jurisdiction.

6. Uniform standards should apply to all clinicians entitled by professional practice statutes to provide the same or similar services. Licensing bodies responsible for monitoring the quality of healthcare professionals should collaborate within each profession and across professional and geographic boundaries.

7. All healthcare professionals should demonstrate continuing proficiency through a robust system of ongoing competence assessment and measurement of practice effectiveness as a condition of continuing licensure. A system of relicensure based on uniform standards should be acceptable to all public and private stakeholders seeking competence and performance information about clinicians.

8. Ongoing reform initiatives should support longitudinal study of the formation of healthcare professionals, from undergraduate medical education through continuing professional development in practice, identifying the best means to guide the investment of scarce resources in the development of future healthcare workers.
POLICY: All Americans must have access to affordable essential healthcare. The care must be patient-centered, safe, and at least equal in quality to healthcare in other developed nations. An appropriately sized and distributed health workforce must be competent to provide these services. These are required conditions to protect the health of the public.

The ongoing national debate over reform of the US healthcare system addresses one of the most critical policy and economic challenges of our times. This debate engages the National Board of Medical Examiners (NBME), whose overarching mission is to protect the health of the public through state-of-the-art assessment of health professionals. We are deeply concerned that the health professionals whose proficiency we assess are currently working in a dysfunctional healthcare system. The very structure of this system is an impediment to public health. An outline of some of the evidence supporting the need for reform of our health system is provided in the Appendix.

An extensive national dialogue on healthcare reform has exposed to public view compelling evidence of the untenable ways in which the system has failed its consumers and its practitioners. The overwhelming evidence of the need for reform and the threat of the current system to NBME’s mission compel us to add our voice to those who support recent reform legislation and call for additional urgently needed reforms, including how healthcare is structured and delivered and how clinicians and institutions are held accountable for providing acceptable quality.

Our quality problems are evident: US outcomes compare poorly with other developed nations that have universal coverage and functional systems, yet we spend substantially more for our poorer outcomes. Such quality lags are unacceptable. Our system’s practices and outcomes must meet or exceed, by accepted measures and assessments, the highest standards achieved in the healthcare systems of other developed countries.

All Americans must have access to essential healthcare services at an affordable cost. Such access requires that healthcare professionals are adequate in number and appropriately distributed. Concurrently, our system must also address quality of care provided: patient-centeredness, safety, and outcomes equal to the best available anywhere in the world. These are required conditions to protect patients as well as to enable the professionals whose proficiency NBME assesses to go forth to serve the public health.
POLICY: Continuing efforts at healthcare reform should support the creation of a system within the professions for defining a common framework for competence, articulating minimum standards, encouraging continuous improvement, and developing common tools for measuring competence and performance for all healthcare professionals caring for patients in the United States.

An effective system without capable clinicians will not deliver optimum quality; conversely, capable clinicians in an ineffective system are unlikely to deliver optimal quality care, nor can they be cost-effective. The recent debate on healthcare reform has focused primarily on access to care and the cost of delivering care; these are the dominant themes in the 2010 Patient Protection and Affordable Care Act. While these aspects are central, reforms that address only access and cost will fail to meet their potential if they do not concurrently emphasize quality of healthcare services and of healthcare practitioners. The provisions in the Act supporting improved quality are only a beginning; continuing reform in which quality is a central theme should remain a high national priority.

Currently, a number of competing definitions of competence are in use (described in the Appendix). Creating a mechanism for reaching consensus on the definition of clinician competence – the kind of care that we believe to be the threshold for acceptability in our country – is an essential part of health system reform. Defining standards for minimally acceptable practice within a health profession is an intrinsic responsibility of the profession itself. Health system reform should support the health professions, individually and collectively, in the task of developing uniform definitions, measures, and standards.

Widely accepted uniform standards will allow the system to utilize assessment and measurement as a means of assuring compliance and encouraging improvement. The minimum standards developed should be acceptable and familiar to both the public and healthcare practitioners so that a mobile workforce and population provide and receive excellent care irrespective of locale or setting. The NBME provides an example of a mechanism for developing consensus on uniform standards; an overview of the NBME as a model for establishing standards is provided in the Appendix.

Assessments of competence and measures of performance become feasible after standards have been defined. Assessment of competence assures that a clinician (or an institution) has the knowledge, skills, and behavioral characteristics that are believed to be essential to meeting practice standards. Assessment of performance is based on measures in relation to tasks in the workplace. Such measures are essential ingredients in any system intended to promote evidence-based quality improvement, but with our current state of knowledge they are sometimes difficult to acquire, difficult to interpret, and often costly. Measures of competence can be standardized and benchmarked more readily than performance measures. There are some indications that measures of competence correlate positively with performance; they will continue to be useful tools even as more effective performance measures develop. However, measures of performance are likely to become increasingly important, particularly in efforts to support continuous quality improvement among active clinicians. Further information on the tools for assessment of competence and performance is provided in the Appendix.

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An overview of the current systems in place to prepare and assess physicians is provided in the Appendix. The reform process must encourage the development of coherent systems to evaluate clinician competence and performance, provide for mechanisms to improve skills in those found to be proficient as well as mechanisms to remediate practitioners who fall below minimal acceptable levels. Likewise, mechanisms for evaluating healthcare processes and outcomes to identify areas for systems improvement will facilitate improvement in clinician performance and healthcare quality.

Enhancements of healthcare information systems arising from health system reform should support both patient care and clinician assessment needs, since effective clinician assessment translates into improved patient care.
POLICY: The public expects and deserves a system of accountability that cannot be circumvented. Licensure of health professionals by states should provide that system, holding healthcare professionals accountable throughout their careers through substantive initial licensure and periodic renewal of professional licenses.

Many healthcare professionals engage with systems intended to support continuous improvement. These include such things as formal continuing education (sometimes required for licensure), confidential error reporting systems, peer review, voluntary specialty certification, and maintenance of certification. The NBME commends the professions and individual professionals for investment in these tools to improve safety and enhance quality. Currently, however, the only mechanism in the United States through which all practicing health professionals are held accountable is licensure. Initial licensure sets a minimum standard for the educational system to meet and for individuals to exceed. License renewal processes can be envisioned that would drive improvement in the quality of healthcare delivery.

In a reformed healthcare system, maintaining minimum levels of practice-relevant competence and performance in all requisite domains should be assured by the state licensure renewal process. Additionally, we would encourage all health professionals to seek levels of quality and safety that exceed minimum standards in systems, such as maintenance of specialty certification, that aim higher than minimum standards for licensure. Continuous improvement as a voluntary component of professionalism will also support the gradual rise of minimum standards over time. Licensing authorities must require evidence of attaining and maintaining competence and demonstrating performance in the domains relevant to the licensed clinician’s practice as a condition of initial and reregistration for licensure. Only the licensing authority has the “stick” to require that all practitioners are continuously accountable for maintaining requisite minimum professional qualifications. Licensing authorities should also rise to the challenge of offering “carrots” that encourage lifelong learning and continuous improvement.

POLICY: Licensed clinicians must demonstrate proficiency in all domains important to effective care, including some that have been underemphasized, including: patient-centeredness, communication, prevention, and evidence-based practice.

There has been increasing recognition of the need to evaluate heretofore underemphasized competencies for healthcare practitioners. These competencies are critical to the delivery of high-quality, efficient patient care. They include (but are not limited to):

- Patient-centered care, emphasizing skills in empathy, cultural awareness, and communication
- Health promotion and disease prevention for individuals and populations
- Evidence-based practice utilizing comparative effectiveness data
- Efficient resource utilization
- Assuring optimum patient safety
- Team-based care
- Altruism, integrity, compassion, and the willingness to uphold the ethical foundations of practice
- Continuous development and improvement

A more complete description of these competencies is provided in the Appendix.
POLICY: Health system reform should support state health professional licensing authorities in implementing consistent minimum standards as they grant initial professional licenses. State licensing and regulatory authorities should have responsibility for monitoring and discipline of clinicians who practice in their jurisdiction.

Every patient has the right to expect that the treating clinician is proficient in providing the level of service needed for care, regardless of where (s)he lives or the location at which healthcare services are provided. A reformed healthcare system will foster the development of uniform minimum standards for education, training, professionalism, knowledge, and skill. This will help to ensure the delivery of safe, high-quality medical care to patients in a wide variety of practice settings and will help address the workforce imbalance by facilitating the movement of clinicians to underserved areas.

Although the United States Medical Licensing Examination® (USMLE®) is a customary requirement for initial medical licensure in the United States, there is considerable state-to-state variation in the number of attempts allowed, the time limit for completion of the examination sequence, and the minimum postgraduate training required for initial medical licensure. In addition, a parallel system is available to graduates of osteopathic medical schools. The same is true for other health professions, with greater state-to-state variation in some professions than in medicine. To certify that all clinicians meet common minimum standards, continuing health system reform efforts should at least encourage agreement on minimum core documentation, education, assessment, and other requirements for initial licensure and for maintenance of licensure for each health profession.

However, to promote safe and effective patient care, local licensing authorities should continue to have the flexibility to determine whether it would be appropriate to have additional standards for clinicians practicing locally. Furthermore, local licensing authorities must retain the responsibility for determining whether a clinician is proficient to continue to practice, for directing remediation of clinicians who fail to meet minimum standards for safe practice, and for disciplining those who prove to be incapable of providing safe, effective, and ethical patient care. Even in these locally administered regulatory activities, national healthcare reform should encourage much greater coordination among health professions licensing authorities to assure the public that all practitioners are held accountable to uniform standards.

Healthcare system reform should explore mechanisms of achieving reciprocal recognition in all jurisdictions of clinicians who have met common minimum licensing standards in a manner analogous to nursing licensure in some states and driver’s license registrations, which are recognized across all US jurisdictions.

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2 Osteopathic physicians may utilize the USMLE in most jurisdictions; however, most osteopathic physicians are licensed based on COMLEX, the national licensing examination developed by the National Board of Osteopathic Medical Examiners.

3 [http://www.fsmb.org/usmle_elinitial.html](http://www.fsmb.org/usmle_elinitial.html)
POLICY: Uniform standards should apply to all clinicians entitled by professional practice statutes to provide the same or similar services. Licensing bodies responsible for monitoring the quality of healthcare professionals should collaborate within each profession and across professional and geographic boundaries.

When healthcare services are more accessible and available to all individuals in the United States, it will be critical that the total health professional workforce be allocated and utilized in an efficient and effective way. Any new system for high-quality healthcare will require an overlay of coordination and integration of services. One model of this concept, the “medical home,” is designed to provide a coordinating hub for each individual’s healthcare needs. In order to achieve a high level of integration of care, it is imperative that a common approach to the determination of proficiency across the continuum of a patient’s interactions with the system be applied to all the healthcare professionals involved.

In the United States, the scope of professional services is defined in laws regulating professional practice adopted by state legislatures and administered by the appropriate licensing authorities. As a result, the scopes of practice for different healthcare professionals may vary considerably across geographic boundaries. Also, some of the components of a healthcare profession’s defined scope of practice may overlap with components of other healthcare professions’ scopes of practice. The NBME does not take a position on the appropriate scope of practice for any specific profession; rather, we support determination of scope of practice by relevant authorities using an evidence-based and “patient-centered” model.

When relevant authorities have determined that clinicians with different professional and educational backgrounds are entitled to provide some of the same or similar services, patients receiving such similar services from these professionals should reasonably assume that each clinician providing these services is competent to provide them. A system that employs common standards and common measures of competence for the same services would help provide this assurance to patients. It might include assessments of knowledge, clinical skills, communication and interpersonal skills, and/or patient care for health professionals who are entitled by law to provide similar patient care services, with unique assessment for those components of scope of practice unique to each profession. Uniform initial and continuing licensure examination components for healthcare professionals who provide similar care for patients combined with unique assessment components related to the unique aspects of scope of practice is one possible pathway for achieving this.

Such a collaborative approach would require joint effort across all health professions and their licensing authorities, both within professions across geographic boundaries and across professional boundaries. In those instances where scope of practice overlaps, those collaborative structures that evolve should be delegated the power and authority for the ongoing monitoring of professionals, using uniform standards. The collaborative structures should include representation of each relevant health profession on oversight and policy groups, standard review groups, and assessment development groups. In a new healthcare system that mandates coordination and integration of care, decisions about which combinations of health professionals can best meet the needs of patients will be more feasible if a coordinated, common assessment approach, based on evidence of performance and ongoing measurement of outcomes and quality, is in place.
POLICY: All healthcare professionals should demonstrate continuing proficiency through a robust system of ongoing competence assessment and measurement of practice effectiveness as a condition of continuing licensure. A system of relicensure should reflect consensus, utilize consistent standards, and should be acceptable to all public and private stakeholders seeking competence and performance information about clinicians.

Current requirements for renewal of licensure vary across professions and jurisdictions; most are administrative in nature. Many professions and jurisdictions do require continuing education (CME) credits; however, CME activities are not necessarily required to relate to the clinician’s practice, and clinicians do not have to demonstrate any impact from the CME on their practice.

In an ideal reformed healthcare system, all clinicians will be held accountable in a system that engages them in continuous development and updating of knowledge and skills relevant to their individual practices. This will require clinicians’ involvement in the ongoing assessment of competence and performance in practice and demonstration of improvement compared with national and regional benchmarks. Clinicians will also provide evidence of acceptable professional behavior and patient-centered care. Formal examinations for continuing licensure are only one small component of the evaluative data necessary to provide assurance of both minimum competence and commitment to continuous learning and improvement. For physicians, this vision is consistent with the adoption in April 2010 of a framework for maintenance of licensure by the Federation of State Medical Boards (see Appendix). It also reflects a growing consensus internationally, with similar systems of ongoing accountability being implemented in Canada and the United Kingdom.

A reformed healthcare system must avoid costly redundancy. Creating a single set of measures and documentation that are mandated for clinicians to meet accountability requirements of all interested parties will simultaneously enhance care and reduce redundancy. To be effective, stakeholders must be encouraged or required to accept the uniform minimum standards and measures of compliance as the starting point for establishing local requirements. Ideally, any additions to these standards should be based on sound evidence documenting a local need for additional requirements. Collection and reporting of uniform data should also facilitate expanded research collaboration to assess the impact on the quality of care.

A system for maintenance of licensure will promote quality and practice improvement, driven by clinicians’ commitment to the public to provide quality healthcare. If clinicians are to accept and embrace participation in a system of maintenance of licensure, it will be critical to separate these improvement-focused initiatives from the traditionally punitive orientation of many regulators. The system must be trustworthy and the measures must be valid indicators of competence and high-quality patient care; clinicians will need to know that their data will be used to identify practice improvement opportunities and will remain otherwise confidential. Further, clinicians should be able to pursue education when deficiencies are identified in their practice without fear of disciplinary action being taken against them.
POLICY: Ongoing reform initiatives should support longitudinal study of the formation of healthcare professionals, from undergraduate medical education through continuing professional development in practice, identifying the best means to guide the investment of scarce resources in the development of future healthcare workers.

Congress should authorize and fund an analysis of the investments made by society in educating and monitoring the health professions workforce. An ongoing Framingham-like longitudinal study that gathers data to assess the relative effectiveness of approaches to education, assessment, and professional development would allow decisions about future health system reforms to be more evidence based than is possible today.
ONE VIEW OF SYSTEM REFORM THAT MIGHT ACCOMPLISH THESE GOALS

As a reformed healthcare system continues to be crafted for the United States, lawmakers have first focused on increasing access to and affordability of care. However, the opportunity should not be missed to assure all Americans that their healthcare will meet or exceed common minimum standards, no matter where they live or from whom they seek medical care. Ultimately, the reformed system should contain mechanisms to define evidence-based standards and to apply those standards uniformly throughout the country. It should also nurture supporting health professionals in constantly improving their practices for the benefit of patients. While standards may also apply to hospitals, insurers, pharmaceutical and device manufacturers as well as others, those with the greatest direct effect on patients will relate to individual clinicians.

Future iterations of health system reform legislation should seize the opportunity to define uniform minimum standards and to encourage all clinicians to continuously meet those standards. Further, clinicians should be motivated to demonstrate commitment to continuous learning and improvement in domains relative to their practices. One mechanism for achieving this goal would be to authorize compensation for clinical services by governmental or private payers only for clinicians who are licensed by an authority that ascribes to and enforces this philosophy.

Standards should relate both to criteria for initial licensure and for continuing authority to practice. Legislation should mandate common uniform minimum requirements, including educational credentials, evidence of sound character, results of assessments, and processes for granting clinical privileges. Further, continued licensure should require clinicians to provide periodic evidence that they maintain proficiency and update and improve their practice. Such standards require the availability of practice-relevant tools for assessing ongoing competence and performance; federal initiatives should support the continued creation and refinement of these tools through those organizations already engaged in their development. A common standard for minimally acceptable engagement in continuous improvement through professional development, including continuing education and analysis and practice-based learning, should also be developed and required as a condition of continuing licensure. Information about clinicians gathered through such a system should be mandated as acceptable for all public and private entities seeking basic information about clinician competence and performance.

The public deserves excellent care regardless of the professional providing the service. In a reformed health system, professionals with different educational backgrounds, such as physicians and nurse clinicians, should be held accountable to common standards where the law provides for overlap in their scopes of practice. Licensing authorities for clinician groups with overlapping scopes of practice should create a collaborative common means of assessing proficiency for entry to and continuation in these overlapping domains of practice.

Federal reform initiatives should nurture a framework for creating uniform patient-centered, evidence-based consensus on the definition of competence domains; appropriate measures of these domains; and standards that can serve as a minimum for licensing, credentialing, and certification. The NBME has demonstrated that an organization within the professions independent of government can establish effective standards. Once a system for establishing and maintaining standards is established, federal statutes and regulations should use all available fiscal and other tools to encourage their adoption by all voluntary certification and credentialing bodies as well as licensing authorities, thus reducing confusion and inefficiency that arise from competing or conflicting standards.

Examples of such organizations include: the National Quality Forum, the National Quality Measures Clearinghouse, the Physicians’ Consortium for Performance Improvement, and the many local initiatives in individual health systems and hospitals.
APPENDIX

EVIDENCE OF THE NEED FOR REFORM OF THE HEALTHCARE SYSTEM

The facts about our healthcare system present self-evident reasons for the need for reform. Our healthcare system has excluded tens of millions of Americans who are unable to afford any health insurance and many millions more who are underinsured because they cannot afford sufficient insurance. We need insurance and payment mechanisms that assure quality care for and protect the health of all of the public.

The composition and distribution of the healthcare workforce are not in balance with the needs of the public. Of special concern are impending shortages, especially in primary care. There are significant imbalances in the distribution of healthcare professionals with respect to specialties and geography. These imbalances result in differential access and outcomes for patients. The healthcare system must assure that there are sufficient professionals to meet public needs for healthcare services across all areas of our nation. We need a compensation and incentive system that helps achieve this goal.

Our healthcare system is plagued by preventable medical errors and adverse events, and in too many instances, unacceptable variations in quality within and across geographic regions. Some patients receive quality care; others do not. The system is fragmented, lacking patient-centered coordination and care. The fragmentation of care increases the likelihood of medical errors and quality deficits. We need to remove the system roadblocks to quality care and improve clinicians’ skills in avoiding errors and optimizing quality.

There is a mismatch between the health needs of the public and the payment systems for professionals. Some specialties are undercompensated while others are overcompensated. Compensation is based on the number of procedures, rather than on patient-centered care that furthers prevention and optimal allocation of resources. Utilization of the clinicians’ total body of medical and communication skills is undervalued. The result is a misdirected and inefficient use of resources and excessive expenditures. We need compensation structures based on the treatment needs of the patient, the body of skills of the clinicians, the outcomes of care, and the financial incentives for professionals to serve those needs in an efficient way.

CURRENT FRAMEWORKS FOR COMPETENCE

The issue of the quality of healthcare providers at all levels is closely linked to the quality of healthcare, to clinical outcomes, and to the costs expended to achieve desired results. The Institute of Medicine estimated that 44,000 to 98,000 excess deaths in the United States and significant morbidity arise from the approximately three adverse events that occur for every 100 hospitalizations and attributed these to preventable deficiencies in the quality of healthcare provided. These preventable errors spurred intense national interest in how to make hospitals and healthcare organizations safer. In the ensuing decade, the performance of health systems and, by extension, the actions of professionals who provide healthcare therein has become a prime focus of efforts to improve quality and decrease errors.

5 The Institute of Medicine (IOM) has recognized the issue of quality of care as important to the landscape of current healthcare policy. Its two landmarks reports, To Err Is Human and Crossing the Quality Chasm clearly indicate the importance of quality in the current healthcare debate.

Every organization charged with the responsibility of certifying professional competence has evolved its own methods of defining and assessing competence; however, Epstein and Hundert\(^7\) reported in 2002 that most current assessment formats used in medicine reliably test core knowledge and basic skills, but they may underemphasize such domains of medical practice as interpersonal skills, lifelong learning, professionalism, and the integration of core knowledge into clinical practice. The same is undoubtedly true for other health professions.

The Accreditation Council for Graduate Medical Education (ACGME) is charged with accrediting and evaluating residency programs throughout the United States and thus improving healthcare through assuring high quality resident education. The American Board of Medical Specialties (ABMS) represents the 24 specialty certifying boards in American medicine. The ACGME Outcomes Project was designed to measure actual outcomes of residency programs; part of this project was to define the general competencies required to prepare resident physicians to independently practice medicine. This definition was undertaken jointly with the ABMS.\(^8\) The competency taxonomy developed through the Outcomes Project has subsequently been adopted and expanded for application to specialty certification and maintenance of certification, undergraduate medical education, and physician practice (see the Guide to Good Medical Practice – USA, described below under “Current System Characteristics”). The six general competencies identified are: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professional behavior, and systems-based practice. While there are other competency schemes (Institute of Medicine competencies, AAMC Medical School Objectives Project, and the CanMEDS Physician Competency Framework, to name a few), the general competencies developed by ACGME/ABMS are being used extensively.

**THE NATIONAL BOARD OF MEDICAL EXAMINERS (NBME): A MODEL FOR THE DEVELOPMENT OF STANDARDS**

The NBME plays a key role in quality assurance at the point where physicians become licensed to practice medicine in the United States. As the cosponsor and testing agency for the United States Medical Licensing Examination® (USMLE®), the NBME oversees the selection of medical content – the relevant knowledge and skills – to be formally assessed as a precondition for medical licensure. The NBME guides the process of establishing the common national performance standard for the USMLE. Every doctor\(^9\) – including the international medical graduates who comprise nearly 25% of new practicing doctors – must meet these standards in order to receive an initial license to practice in the United States.

Since its founding as a certifying body for physician licensure in 1915 by eminent leaders in medicine,\(^10\) the NBME has fulfilled its mission by convening medical, measurement, regulatory and other professionals to certify competence. The core of NBME’s mission has focused on licensure of physicians, first through NBME Certifi-
Serving the public through evaluation of healthcare professionals worldwide

The NBME also partners with FSMB to provide resources for the assessment of doctors after initial licensure for purposes of supporting state licensing authority investigations, granting a license in a new jurisdiction, and documenting competence upon practice reentry. Further, the NBME has assisted sister organizations in national certifying assessments for physician specialists, physician assistants, medical assistants, electrophysiology technicians, genetics counselors, veterinarians, and most recently Doctors of Nursing Practice who engage in comprehensive primary patient care.

The USMLE, developed by nonprofit organizations in the private sector, establishes consensus among regulatory, academic, practitioner, and measurement stakeholders. It not only holds individual physicians (both domestic and international medical school graduates) accountable to common standards when they seek the legal authority to practice anywhere in the United States, but also provides unique benchmarking information for medical schools, residency training programs, and other educational institutions preparing these doctors for practice. The USMLE has consistently sought to expand the range of knowledge and skills assessed. For example, in the past 10 years, USMLE has added a complex simulation of patient management skills and a test of interpersonal, communication, and physical examination skills. The latter is the only known example of a professional licensing examination in which some pass/fail decisions are based on ratings of communication skills and professional behavior by members of the public. A comprehensive review is currently under way; the future USMLE will more fully integrate fundamental science into the clinical context, enhance assessment of clinical skills, and expand assessment of professional behavior and the ability to work within complex healthcare systems.

In addition to the USMLE and other licensing and certifying tests, the NBME provides standardized assessments used by essentially all US (and many international) medical schools and in graduate medical education. These tools allow schools to assess individual student mastery of curricular content using benchmarks based on student performance across the United States. The NBME also provides a variety of self-assessment tools for use by students and physicians.

For nearly 100 years, the NBME has developed and refined its skills in convening stakeholder experts to create valid and reliable assessments that will inform decisions of licensing authorities and guide medical educators. These assessments’ content and standards represent a detailed description of the minimum standards for entry into medicine as a profession. This expertise is a unique resource for defining standards for health professionals and for creating appropriate measurements to assure that these standards are met.

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11 The USMLE clinical skills examination is developed and administered through the Clinical Skills Evaluation Collaboration (CSEC), a joint project of the NBME and Educational Commission for Foreign Medical Graduates. CSEC provides another example of private, professional organizations collaborating to improve the assessment standards for health professional competence in the United States.

12 For further description of the NBME, see www.nbme.org. For further information on USMLE, see www.usmle.org. Comprehensive information on the programs of the NBME is provided in its Annual Report, available in PDF on the NBME Website.

POLICIES OF THE NATIONAL BOARD OF MEDICAL EXAMINERS® REGARDING HEALTH SYSTEM REFORM 14
MEASURES OF COMPETENCE AND PERFORMANCE

A wide range of tools is available for the assessment of competence. Since the early years of assessment, there has been a strong focus on assuring mastery of an appropriate body of knowledge; this is, after all, a definitional hallmark of any profession. Due to concerns with reproducibility of scores, essays and oral exams as elements of the medical licensing assessment program began to be replaced almost 60 years ago by multiple-choice exams, which now form the backbone of current competence assessment. A second focus has been on clinical skills, tested originally at the bedside of patients and more recently in a more standardized format utilizing simulated patients. This allows for testing fundamental skills relevant to history taking, physical examination, overall diagnostic assessment, and treatment plan formulation. It also provides the opportunity to test behaviors and skills relevant to communication, interpersonal interactions, professionalism, and cultural sensitivity. In addition, the ability to manage clinical situations has been assessed using various simulation devices and systems.

These approaches have the tremendous advantage of standardization and providing scores that are highly reliable. On the other hand, they all involve testing in artificial settings remote from the field of practice and, therefore, more accurately measure theoretical potential to perform in a real setting rather than actual performance in the real setting.

Measurement of actual performance requires collection of workplace data from the clinician’s practice that speak to such issues as diagnosis, clinical decision making and management, procedural skills, and behaviors appropriate for effective interaction with other healthcare providers and with patients and their families and caregivers. Relevant methodologies for assessment of performance include multi-source feedback, peer review, and a variety of measures of processes of care and outcomes that, in comparison with standardized approaches used for measuring competence, are still relatively poorly developed.

There are several challenges associated with performance measurement. The first is simply that of obtaining the relevant data set from an often-chaotic workplace that does not have ready mechanisms for data capture. Where data capture is possible, data are fragmented across many sites and systems. Mechanisms for aggregating the clinical data required for assessment of care processes and outcomes are not yet adequately developed to produce meaningful global measures. Healthcare has been slow to adopt electronic medical records (EMRs), and the systems in place are generally inflexible and poorly positioned to provide on-demand data sets tailored to the individual physician. Having an observer looking over each physician’s shoulder on a regular basis is unrealistic, and it is highly inefficient for physicians to spend time collecting, recording, and aggregating the required primary data.

Another limitation of measurement of performance is that the aggregate experience with analysis of such data sets remains limited, and interpretation is often problematic. Examples include the relative importance of different process-of-care measures and confusion around attribution (i.e., responsibility for the outcome in question) of the measure to individual clinicians. Another issue is how to aggregate performance for a given physician across widely discrepant measures. The cost of building systems that would solve these issues is unknown, but likely to be large. Nevertheless, the focus of health system reform on the implementation of technology-based record systems holds the promise of supporting progress in the meaningful assessment of performance.

In the real setting, each clinician’s practice is in some respect unique, even within the same specialty and subspecialty. It is consequently harder to standardize measures and provide appropriate benchmarks among physicians.
One possibility is to provide repeated measurement feedback that compares the clinician’s performance with past performance. Another approach involves a comparison of each clinician’s conformance with widely accepted performance norms, although these are now limited in number and of uncertain relevance to clinical outcomes. It is also possible to batch together performance data for groups of physicians with substantially similar practice profiles. However, other than the obvious challenges in aggregation of data at a regional or national level across widely differing systems and practice environments, there is the probability of bias due to unrecognized differences between practice locations, practice population characteristics and severity of illness, and across the different health systems involved. In contrast, measurement of competence using simulations provides a readily controllable means of standardizing assessments that is relatively straightforward. Direct comparison is thus possible with all others who complete the same assessment, either at the same or different times, or at the same or different locations.

There is an emerging body of evidence that competence measures may correlate positively with performance, although the strength of this association is confounded by limitations in the current state of performance measurement and the few empirical studies addressing this issue. Where such positive correlation exists, straightforward tests may adequately predict performance or at least identify physicians for whom additional measures of actual performance are needed. It will be important to continue to improve the current measures of both competence and performance.

Most current systems of assessment in the health professions are associated with high-stakes decisions, including medical licensure, specialty certification, and clinical privileging (see section “Current system characteristics”). Physicians often devalue feedback from assessment or reject it outright, even where measures of performance in the workplace could potentially have great value as a baseline to drive improvement longitudinally. This argues that performance measures must be shown to be accurate, tailored to the individual physician, and to provide feedback in a form that is “actionable,” provoking both learning and quality improvement. Eventually, routine monitoring of performance will provide an evidence base for continuous improvement and may reveal impending problems or deficiencies before they result in adverse patient outcomes or the need for disciplinary action and while they are still amenable to remediation.

CURRENT SYSTEM CHARACTERISTICS

Assuring the quality of the healthcare workforce begins in professional school, continues through postgraduate training (residency), and should extend through the lifetime of practice. Assessment of competence (what a clinician is able to do) dominates assessment in formal professional education and throughout the lifelong learning and continuous quality improvement expected of individual practitioners. While such assessment may provide insight into actual performance (what the clinician does habitually when not observed), direct measures of performance are few. Furthermore, the extent of competence testing in practice is variable and often absent among practitioners.

Measures of performance are presently relatively undeveloped and often resisted by physicians. A further complicating factor is the multitude of interrelated but independently governed professional organizations with re-
sponsibility for assuring the proficiency of individual practitioners. While each of these organizations generally includes key stakeholders, there is no overarching group with a mandate to define healthcare professional competencies and appropriate standards. Participants in the Physician Accountability for Physician Competence summits have recently drafted a detailed description of essential competencies for medical doctors (*A Guide to Good Medical Practice – USA*) based on the six general competencies articulated by ACGME and ABMS, but have been unable to reach consensus on whether the defined competencies should be used solely as aspirational goals or considered standards.

Several elements of current systems to assure proficiency merit additional discussion.

**Medical licensure**

The license to practice medicine and most other healthcare professions in the United States is not granted at the time of graduation. Licensure requires documentation of competence beyond graduation alone. The licensing authority of each state is empowered by the legislature to issue licenses, regulate practice within the guidelines of the state’s practice act, and discipline clinicians who violate the act. Licensing authorities predominantly rely on measures of competence. In medicine these are reflected by medical school and residency credentials and successful completion of all three steps of the USMLE or the Comprehensive Osteopathic Medical Licensing Exam (COMLEX-USA). However, the individual licensing authorities established to oversee individual health professionals rarely coordinate their work across jurisdictions or across professions, despite the fact that there are increasing areas of overlap in the domains of practice of licensees of different health professions.

Professional licenses must be periodically renewed, usually every few years. However, state licensing boards have limited ability to assess the competence or performance of applicants throughout a lifetime of practice. Requirements for continuing education have been adopted by many boards but are inconsistently enforced, and the impact of traditional continuing education on patient outcomes is limited. Assessments of the knowledge and clinical skills requisite for undifferentiated practice, such as the Special Purpose Examination (SPEX), have been developed for physicians reactivating a license after a period of inactivity or involved in disciplinary proceedings, but they have not been widely adopted.

State licensing authorities are under increasing pressure from the public to assume more accountability for healthcare professional performance across a lifetime of practice. There is general agreement that competence and performance in practice should be periodically reassessed as part of a system to encourage continuous improvement while assuring minimum competence, although views differ on specific objectives, reassessment intervals, assessment methods, and how reassessment should be linked to licensure, certification, and employment (credentialing and clinical privileging).

The Federation of State Medical Boards (FSMB), a membership organization of state medical licensing authorities, recognizes that “state medical boards have a responsibility to the public to ensure the ongoing proficiency of physicians seeking relicensure.” In 2008, the FSMB adopted five principles to guide future maintenance of licen-
sure (MOL) policy development. They include: support physicians’ commitment to lifelong learning and facilitate practice improvement; be administratively feasible; not be overly burdensome to the profession; offer a choice of options for meeting requirements; and balance public transparency with physician privacy protections. In addition, the FSMB reemphasized that, in its opinion, the “authority for establishing MOL requirements should remain within the purview of state medical boards.”

In 2010, the House of Delegates of the FSMB adopted a framework for maintenance of licensure. The framework includes the following elements:

“As a condition of license renewal, physicians should provide evidence of participating in a program of professional development and lifelong learning that is based on the general competencies model:

- medical knowledge
- patient care
- interpersonal and communication skills
- practice-based learning
- professionalism
- systems-based practice”

“The following requirements reflect the three major components of what is known about effective lifelong learning in medicine:

1. Reflective Self-Assessment (What improvements can I make?)
Physicians must participate in an ongoing process of reflective self-evaluation, self-assessment and practice assessment, with subsequent successful completion of appropriate educational or improvement activities.

2. Assessment of Knowledge and Skills (What do I need to know and be able to do?)
Physicians must demonstrate the knowledge, skills and abilities necessary to provide safe, effective patient care within the framework of the six general competencies as they apply to their individual practice.

3. Performance in Practice (How am I doing?)
Physicians must demonstrate accountability for performance in their practice using a variety of methods that incorporate reference data to assess their performance in practice and guide improvement.”

Work is ongoing to translate these principles into an operational plan acceptable to licensing authorities. Significant strains affecting the state-based medical licensing system arise from demographic and practice trends. Notable examples include physician mobility that requires multiple licenses; technological innovations that allow a physician in one jurisdiction to practice in another; and focused training and practice that result in highly specialized practitioners, in the face of a license that grants the right to undifferentiated medical practice. The need for validated practice-based assessment tools and universal minimum medical licensing standards in the United States is increasingly evident.

**Specialty certification**

With the proliferation of specialization, voluntary certification by one of the 24 member boards of the American Board of Medical Specialties (ABMS) or the American Osteopathic Association’s Bureau of Osteopathic Specialties has become an important professional qualification for physicians. Between 1995 and 2004, member boards issued nearly 250,000 general certificates in 37 different specialties and nearly 80,000 subspecialty certificates in 92 different subspecialties. However, despite the availability of certification, it has been estimated that 25% to 35% of practicing physicians have chosen not to apply for or maintain certification. Dozens of boards that are not members of ABMS also offer specialty credentials; while there is some consistency in the requirements and rigor for certification from ABMS member boards, such consistency is not present among the many other groups offering certification. Similar specialty certifications are offered for other health professionals as well, including, for example, physicians’ assistants and advanced practice nurses.

ABMS board lifetime certification will soon be a thing of the past. Time-limited certificates have now been adopted by all ABMS-member boards; all new diplomates are automatically enrolled in their board’s maintenance of certification (MOC) program. In addition, information regarding participation of diplomates in a lifelong learning and assessment process will be made available to the public.

ABMS maintenance of certification involves five basic components: professional standing, as evidenced by an unrestricted license to practice medicine; continued learning, as evidenced by the completion of practice-relevant continuing education or self-evaluation modules; cognitive expertise, as evidenced by successful completion of a standardized examination; performance in practice, as illustrated by the medical care provided to patients with common or significant health problems; and behavior, including patient communication and professionalism.

Various ABMS member boards have instituted different approaches to fulfilling these general requirements. However, irrespective of approach, the weakest link in this ambitious program is the development of robust methodologies for assessing practice performance. Despite these challenges, many policymakers see MOC as an important step in documenting and enhancing physician proficiency given that state medical licensing boards set standards for licensure and re-licensure at the most minimal level of physician proficiency. Indeed, it is likely that maintaining board certification will fulfill future MOL requirements (as is recommended in the FSMB framework).

Systems comparable to those described above are less developed, but no less needed, for other health professions. Further, as clinicians from different educational backgrounds assume increasing responsibility for patient care, the plethora of licensing and certifying authorities makes it likely that the public will have no uniform assurance of competence or performance unless the healthcare system incorporates a consistent, uniform approach to licensure and certification.

**Credentialing**

Credentialing is the process of formal recognition of current clinical competence utilized by hospitals, health plans, and employers. Credentialing includes verification of character, education and training, professional licenses and specialty certifications; review of adverse clinical occurrences, including malpractice determinations; and evaluation and monitoring of professional behavior, clinical judgment and technical proficiency relative to established norms. Credentialing defines a clinician’s scope of practice and the clinical services he or she may provide (“clinical privileges”) within the confines of the credentialing organization and attempts to ensure that
clinicians provide services solely within the scope of the privileges granted.

Credentialing must be the product of qualified and objective professionally controlled peer review, must be directly related to the quality of patient care, and must utilize criteria established through common professional, legal, and administrative practices. In the United States, standards promulgated by professional societies and the Joint Commission (which accredits hospitals and healthcare organizations) and other credentialing bodies form the basis of the credentialing and privileging processes.

As with MOL and MOC, health professions outside of medicine have made little progress in requiring evidence about performance as a condition of retaining permission to practice within individual institutions. Further, physicians practicing outside institutional settings may not be subject to these credentialing systems.

**Continuing education**

Continuing education (CE) is the vehicle by which clinicians strive to match learning with the ever-evolving expectations of quality across a lifetime of practice. Delivered by a wide array of providers (from expert to uninformed) and often supported by sources external to the profession (predominantly pharmaceutical and medical device manufacturers), it is the longest component of the professional education continuum. Recently, professional organizations have worked to move beyond a predominantly lecture-based delivery system. The Accreditation Council for Continuing Medical Education (ACCME) and others have sought to move beyond a funding system dominated by significant actual and potential conflicts of interest, and leaders in the continuing education environment now emphasize the need for education linked to documented practice needs.18

The CE community faces a series of imposing challenges: to value, exemplify and promote lifelong learning; to employ validated, outcomes-based learning methods; to develop funding sources that do not foster potential and actual conflicts of interest; to interconnect healthcare education and delivery within the workplace; and to emphasize those competencies (e.g., team-based collaborative practice) critical to effective practice in a rapidly evolving healthcare system. While progress is evident on many of these fronts, we continue to be challenged to deliver demonstrably effective educational programs tailored to the needs of individual clinicians (or even groups of clinicians with similar scopes of practice).

**HEALTH PROFESSIONALS’ COMPETENCIES**

Contemporary patients expect a greater role in their own care than may have been the case in the past. Clinicians must have the skills to practice in a patient-centered manner: eliciting patient preferences, respecting patient choices, coaching patients in making decisions in their own best interest, communicating clearly with patients and families, and engaging with patients and their families in the relevant cultural context. These behaviors require advanced knowledge and skills in empathy, cultural awareness, and communication.

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18 These challenges were most recently addressed in a state-of-the-art conference, sponsored by the Josiah Macy Foundation in 2007, which set the stage for reform by emphasizing the importance of: instilling lifelong learning skills in medical school and residency and thereafter maintaining and enhancing these skills; developing and deploying meaningful models of interprofessional education; increasing the awareness of workplace learning while simultaneously decreasing the focus on didactic methods as the primary format for CME; and heightening attentiveness to the importance of CME as a tool to improve competency and performance. A follow-up conference held in 2009 to define the essential steps in reforming CME has yet to report.
Historically the focus of health education has been on the preparation of practitioners to treat disease. Less attention has been paid to prevention of disease. However, the appearance of clinical signs or symptoms as markers of illness often occurs late in the disease process. Therefore, it is important that healthcare practitioners understand and demonstrate the ability to promote health and prevent the occurrence and progression of disease whenever possible. Health promotion and disease prevention activities occur at the individual patient level as well as at the population level. Healthcare practitioners should be able to demonstrate proficiency in communicating to patients about health promotion and disease prevention strategies including diet, exercise, and sleep; and to potentiate these behaviors. At the population level, practitioners should recognize and actively influence factors that contribute to disease occurrence, including environmental and social factors.

In the past, health professions’ education primarily has emphasized the acquisition of knowledge. However, providing quality healthcare in a changing environment requires competencies related to evidence-based healthcare such as health promotion advice, diagnostic and therapeutic choices, understanding positive/negative aspects of study methodologies, translation of data from studies to bedside, understanding costs/benefits/risks of diagnostic and therapeutic choices, and competencies that culminate in patient safety. Provision of healthcare involves advising patients regarding choices about diagnostic and therapeutic alternatives. Yet, when healthcare practitioners fail to base this advice on an understanding of clinical effectiveness, outcomes suffer and aggregate costs increase. This competency involves understanding the positive and negative aspects of various study methodologies utilized to determine the clinical effectiveness of alternative strategies and the ability to apply clinical effectiveness data within one’s own practice. Practitioners who possess this competency will be able to function optimally within a redesigned healthcare system where the benefits and costs of alternative diagnostic and therapeutic strategies are clearly understood.

An understanding of clinical effectiveness is one component of the practice of evidence-based patient care. This competency requires healthcare practitioners to be able to apply the results of research to the care of patients at the bedside. Choice of diagnostic modality and therapeutic regimen is then based upon the results of well-designed research studies where such studies are available, and, when such evidence is not available, based upon the highest quality evidence. Practitioners are able to help their patients choose a course of action that is specific to each patient and does not consume resources in an inefficient manner. Increasingly, patients are demanding that their care be targeted to their specific situation. It is important that healthcare practitioners understand that resource utilization involves choices among competing alternatives. Resources consumed in an inefficient manner are no longer available to be used to optimize care for other patients.

Efficient resource utilization requires practitioners to understand the costs as well as the benefits of alternative diagnostic and therapeutic choices. Patients should receive care that has not only been proven to be effective but which represents the most efficient utilization of healthcare resources. This skill is particularly relevant in caring for patients at the end of life. Improved patient care outcomes and decreased healthcare costs are directly linked to healthcare practitioner competency in promoting efficient resource utilization. Further, efficient care is only possible when care is coordinated effectively among the practitioners and institutions involved in caring for an individual patient. Efficient practice requires that the clinician possess competence to play an appropriate role in such coordination of care.

Recently, healthcare has begun to apply lessons learned from other industries. The airline industry provides a model for patient safety, which is increasingly being incorporated into the healthcare delivery system. This model
includes the use of checklists, timeouts, formal methods of communication and handoffs, and team training. It is increasingly recognized that enhanced attention to patient care processes can enhance the safety of the care delivered to patients. The ability to evaluate and modify patient care processes to promote optimal patient safety is a critically important competency for healthcare practitioners in a reformed healthcare system. Practitioners who possess this competency can positively impact patient care outcomes and reduce the costs associated with patient injury.

Healthcare is increasingly being provided in a multidisciplinary framework which takes full advantage of the skills of multiple health professionals and institutions. It is increasingly recognized that each of the health professions brings unique competencies to the care of patients, and the application of these combined competencies can produce optimal patient outcomes. The ability to work effectively as a member of a multidisciplinary team and to help guide patients through the complex system of institutions and professionals engaged in their care is a critical competency for all healthcare professionals. Enhanced collaboration among healthcare professionals is essential for the delivery of high-quality, efficient patient care.

Professional behavior encompasses a wide range of competencies that are critical for optimal patient care. These include the ability to recognize the limitations in one’s own knowledge and skills, altruism, integrity, compassion, and the willingness to uphold the ethical foundations of medical practice. During the last decade, health professions schools and postgraduate training programs have increasingly incorporated professionalism education into the curriculum. This has occurred because of the recognition of the importance of professional behavior to the provision of healthcare as well as increased public scrutiny of the healthcare profession.

Medical knowledge is increasing at such a rate that it is impossible for healthcare practitioners to keep up with all the new discoveries. Lifelong learning or learning across the continuum of a practitioner's career therefore becomes critically important. This competency requires that healthcare practitioners be able to recognize the gap between the knowledge and skills they need to provide optimal care for patients and their current level of knowledge and skill. It also requires that practitioners possess the capability to seek out new knowledge from a variety of sources, to critically evaluate this knowledge, and to apply it to the care of their patients. In particular, individual clinicians must have skills for and a commitment to learning from their own practices and improving the care provided.