

## Renewing Board Certification

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Many persons argue that certification of a specialist indicates that he is up-to-date and competent at the time of examination but this does not prove that he continues indefinitely thereafter to be competent and aware of all important new knowledge in his field. This is obviously true and, as the certifying Boards become established and as they complete the examination of the large group of physicians already practicing the specialties, they may find it desirable to issue certificates that are valid for a stated period only.

— The Commission on Graduate Medicine, 1940

Like gross anatomy class and the first night on call as an intern, the medical specialty board examination is a rite of passage for physicians. The first specialty board, the American Board for Ophthalmic Examinations, was incorporated in 1917. Boards soon followed in otolaryngology, obstetrics and gynecology, and dermatology and syphilology (see table). Although the process is voluntary, certification by a member board of the American Board of Medical Specialties (ABMS) has been among the most important professional qualifications for generations of physicians. Board certification is a form of self-regulation that is funded by physicians through application fees and that remains under the control of the profession.

The 24 member boards of the

ABMS are private, nonprofit organizations. They issue 37 general and 92 subspecialty certificates; most licensed physicians in the United States are certified by at least one of them. Between 1995 and 2004, the boards issued 242,985 general certificates and 78,409 subspecialty certificates.

In 2005, board certification is in the midst of two fundamental changes. First, after decades of discussion, all boards have agreed to issue time-limited certificates that necessitate subsequent recertification, usually at intervals of 10 years or less. Application fees for the renewal of certificates can range from \$1,000 to \$2,000 or more. Older physicians whose certificates do not expire will not be required to become recertified, although they can voluntarily do so. The number of these physicians varies markedly among specialties. The American Board of Family Medicine has issued time-limited general certificates since 1970, and the American Board of Surgery has done so since 1976. The American Board of Pathology will not start issuing such certificates until January 2006. Nonetheless, board certification for life will increasingly become a thing of the past.

Second, all boards have agreed to participate in “maintenance of certification,” an expanded recertification program that entails shifting from testing conducted every 6 to 10 years to a more continuous process of assessing competence. The details are still being worked out and will vary among specialties. As of October 2005, 5 boards have plans

that have been approved by the ABMS, and 14 others have contingent approvals. Additional approvals are expected in early 2006.

In part, the changes in board certification represent a response to the quality-of-care movement and the related concerns of the public.<sup>1</sup> The Institute of Medicine and others have emphasized the relationship between quality and systems of health care, rather than the performance of individual doctors,<sup>2,3</sup> but obviously, both are important. In February 2005, a systematic review of the relationship between clinical experience and the quality of health care found widespread evidence that the quality of physicians' performance decreased as the number of years in practice increased.<sup>4</sup>

Other impetuses for the changes are a desire to augment board certification in the face of activities of other groups that set practice standards, such as the Joint Commission on Accreditation of Healthcare Organizations and the National Committee for Quality Assurance, and increased interest in basing some of physicians' pay on their performance. The fall 2004 newsletter of the American Board of Obstetrics and Gynecology listed these reasons for the changes: “The public wants to know that ‘their doctor is currently competent and well-informed — like an airline pilot’”; “If doctors don't do this, someone else will”; and “This is the ‘correct thing to do’ and medicine should take the lead.”

Maintenance of certification entails the evaluation of four

Time Limits for Certification for Members of the American Board of Medical Specialties (ABMS).*				
Board	Year of Incorporation	No. of General Certificates Issued, 1995–2004	Year of First Time-Limited General Certificates	Duration of Certificate (yr)
Allergy and Immunology†	1971	1,172	1989	10
Anesthesiology	1938	12,652	2000	10
Colon and Rectal Surgery	1935	500	1991	10
Dermatology	1932	3,031	1991	10
Emergency Medicine†	1976	10,063	1980	10
Family Medicine†	1969	32,507	1970	7
Internal Medicine†	1936	72,765	1990	10
Medical Genetics†	1980	662	1993	10
Neurological Surgery†	1940	1,311	1999	10
Nuclear Medicine†	1971	709	1992	10
Obstetrics and Gynecology†	1930	11,823	1986	6
Ophthalmology†	1917	4,754	1992	10
Orthopaedic Surgery†	1934	6,298	1986	10
Otolaryngology†	1924	2,919	2002	10
Pathology†	1936	5,206	2006	10
Pediatrics†	1933	27,709	1988	7
Physical Medicine and Rehabilitation†	1947	3,175	1993	10
Plastic Surgery†	1937	2,120	1995	10
Preventive Medicine†	1948	2,492	1998	10
Psychiatry and Neurology†	1934	14,802	1994	10
Radiology†	1934	12,432	1995, 2002‡	10
Surgery	1937	9,943	1976	10
Thoracic Surgery	1950	1,421	1976	10
Urology†	1935	2,609	1985	10

\* Data are from the 2005 ABMS Annual Report and Reference Handbook ([www.abms.org/Downloads/Publications/AnnualReport2005.pdf](http://www.abms.org/Downloads/Publications/AnnualReport2005.pdf)) and from the ABMS. Subspecialty certificates are not shown.

† These boards have approved or contingently approved plans for maintenance of certification, as of October 2005.

‡ The American Board of Radiology first issued time-limited certificates in Radiation Oncology in 1995 and in Diagnostic Radiology and Radiological Physics in 2002.

basic components: professional standing, as evidenced, for example, by an unrestricted license to practice medicine; continued learning, as illustrated by the completion of continuing medical education courses or self-evaluation modules that are relevant to clinical advances in a field; cognitive

expertise, with evidence including performance on a standardized, monitored examination; and performance in practice, such as the medical care provided to patients with common or major health problems covered by a specialty and physicians' behavior, including communication with

patients and professionalism in caring for them.

Dr. Stephen Miller, president of the ABMS, described maintenance of certification as “a quality-improvement and quality-assurance program which we believe is accountable to and credible for patients.” Miller, who is a sur-

geon and plastic surgeon, said that the boards “hear a lot of complaints and consternation from physicians and lack of understanding of how this is going to work.” One reason is that maintenance of certification is “all new and under development, and it is very much in a state of flux.” Another is that some physicians, “once they are certified as specialists, are not happy with ever being examined again.”

Performance in practice is the most controversial component. It is the most difficult to measure — particularly in any way that all parties can agree is meaningful. Approaches vary among specialties, in part because some specialties are more procedure-based than others. The general approach is critical self-assessment, not inspection and regulation. According to a statement on the ABMS Web site, “Except for a few instances of physicians performing large numbers of procedures, most health outcomes researchers feel it is currently not possible to accurately discriminate individual physician performance owing to the many variables involved in the care of patients and the fact that few physicians have patient populations large enough to fairly assess their performance in practice.”

Plastic surgery offers one example of an approach taken in a procedural specialty. Applicants for maintenance of certification in plastic surgery prepare a case list for a six-month period of practice in comprehensive plastic surgery or a more specialized area. The case list is submitted through a Web-based application that provides a standardized format. The American Board of Plastic Surgery compares the case

list with the national Tracking Operations and Outcomes for Plastic Surgeons database, which it developed in conjunction with the American Society of Plastic Surgeons.

Internal medicine, by contrast, offers an example of an approach taken in a specialty in which some physicians perform relatively few procedures. The American Board of Internal Med-

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— Dr. Frank Lewis,  
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icine (ABIM) has modules for practice improvement in such areas as asthma care, clinical preventive services, diabetes care, management of hypertension, preventive cardiology, and care of the vulnerable elderly. Physicians conduct a survey and chart review of patients with the selected condition, submit the data to the board anonymously and confidentially, receive a document comparing their practice patterns with national guidelines, develop a plan for improvement, and measure its effects after implementation. The board also offers a module for the assessment of physicians’ practice style through a brief survey of some of their peers and patients. Neither type of module involves multiple-choice questions or pass–fail standards.

As of January 2006, completion of a self-evaluation module for practice performance will be a required part of maintenance

of certification for internal medicine diplomates with time-limited certificates. Examples are any of the board’s practice-improvement modules, its peer-and-patient-feedback module, and participation in approved quality-improvement programs developed by a medical group, a health plan, an insurer, or a medical society. Elsewhere in this issue of the *Journal*, Brennan (pages 1989–1992), a former chair of the ABIM’s board of directors, and Baron (pages 1992–1993), a current member of the board, describe their personal experiences with the ABIM’s maintenance-of-certification program.

Possible criticisms of maintenance of certification are that it places new administrative and financial burdens on specialists, that it may not actually improve medical practice and patient care, and that the self-assessed components of the evaluation may lack rigor. A possible advantage is that it could replace or be coordinated with other evaluations. According to Dr. Frank Lewis, the executive director of the American Board of Surgery, maintenance of certification is “as much a philosophical change as a requirement change, moving from every-10-year snapshots to a more continuous system of assessment. It is going to take many years to evolve into a final form, and all the measurements that are needed will take several years to develop.” For example, additional ways of measuring physicians’ communication with their patients, staff members, and other physicians are under development, as are measures of medical practices that promote patient safety, such as the timely administration of perioperative

antibiotics or the handoff of care from one physician to another. Many of the boards' educational and assessment programs are being developed in collaboration with medical societies and other organizations.

The changes in board certification also have implications for the licensure of physicians. "A physician who pays a reregistration fee, fulfills any reregistration requirements set by the [state medical] board, and who has not had a complaint filed with the medical board may practice medicine for a lifetime without having to demonstrate that he or she has maintained an acceptable level of continuing qualifications," according to a committee of the Federation of State Medical Boards of the United States.<sup>5</sup> In May

2004, the federation's House of Delegates adopted the policy statement that "state medical boards have a responsibility to the public to ensure the ongoing competence of physicians seeking relicensure." Despite the rationale for state medical boards to require the maintenance of certification or a comparable demonstration of current competence before renewing a medical license, new legislation — passed on a state-by-state basis — would be necessary.

Medical boards are providing their diplomates with information about their final maintenance-of-certification plans and when they will go into effect. Although the boards are enthusiastic about the program and its potential, only time will tell whether it re-

news the meaning and relevance of board certification.

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4. Choudry NK, Fletcher RH, Soumerai SB. Systematic review: the relationship between clinical experience and quality of health care. *Ann Intern Med* 2005;142:260-73.
5. Interim report on special committee on maintenance of licensure. Dallas: Federation of State Medical Boards of the United States, May 2004.

## Glioblastoma Multiforme and the Epidermal Growth Factor Receptor

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Related article, page 2012

**G**lioblastoma multiforme is one of the most aggressive and recalcitrant cancers. A tumor that can be identified radiographically can sometimes be resected, yielding a putatively clean magnetic resonance image postoperatively, but tumor cells are invariably present in areas of the brain that are at a considerable distance from the site of initial diagnosis. The delivery of radiotherapy to a field encompassing the tumor and a margin of 2 to 3 cm increases survival, but not substantially. Systemic treatment may be beneficial, but therapy with nitrosoureas and the methylating

agent temozolomide increases survival only slightly. Virtually all patients with glioblastoma multiforme have an inadequate response to treatment, and the tumor usually recurs at the initial site or distally, sometimes even in the contralateral hemisphere. The vast majority of patients die soon after receiving the diagnosis.

Attempts to treat glioblastoma multiforme and other aggressive tumors have focused on molecular pathways that underlie the cause and virulence of the neoplasm. The striking success of the tyrosine kinase inhibitor imatinib in the treatment of chronic

myelogenous leukemia (CML) has boosted enthusiasm for the use of this approach in solid tumors, despite the fact that the dysregulation of a single gene, such as occurs in the *ABL* gene in CML, is a most unusual cause of the common solid tumors of adults.

Glioblastoma multiforme is a good example of this point. The plethora of genetic abnormalities in glioblastoma includes amplification of the epidermal growth factor receptor (*EGFR*) gene; multiple types of *EGFR* mutations, the most common being *EGFR variant III* (*EGFRvIII*); loss of the tumor-suppressor protein