

Report of the Special Committee on the Evaluation of Undergraduate Medical Education

Adopted as policy by the House of Delegates of the Federation of State Medical Boards

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Introduction

The Special Committee on the Evaluation of Undergraduate Medical Education was formed in 2004 in response to Resolution 04-5 passed by the House of Delegates of the Federation of State Medical Boards. The charge to the committee was to...

- Gather, review and synthesize information regarding accreditation standards applied to U.S. and Canadian medical school programs;
- Identify and evaluate accreditation standards applied to medical school programs located outside the U.S. and Canada;
- Review systems used currently to classify medical school programs located outside the U.S. and Canada and
- Evaluate the feasibility of establishing criteria that could be utilized by state medical boards in classifying international medical schools.

In the United States and Canada, all medical school programs are accredited by either the Liaison Committee on Medical Education (LCME) or the American Osteopathic Association's (AOA) Commission on Osteopathic College Accreditation (COCA). The LCME and AOA accreditation systems provide assurance to medical students/graduates, the medical profession, medical regulatory bodies, healthcare institutions and the public that undergraduate medical education programs in the U.S. leading to the M.D. or D.O. degree meet reasonable and appropriate national standards for educational quality and that graduates have a sufficiently complete and valid educational experience.

While graduates of the 125 LCME- and 20 AOA-accredited medical school programs constitute the majority of new physician licensees in this country each year, graduates of medical schools located outside the U.S. comprise 1/4 of all licensed physicians in the U.S.² The contributions of this latter group are not insignificant. International medical graduates (IMGs) contribute to the overall ethnic, racial and religious diversity of this country's physician workforce. There is evidence that primary care programs and hospitals in the U.S. are heavily dependent upon the IMG population for their workforce. IMGs also serve an important role in underserved areas as evidence exists that IMGs holding temporary or J-1 visas are more likely to practice in a medically underserved area than U.S. graduates.^{3,4}

Questions relative to the licensing of individuals graduated from one of the 1,800+ medical schools located outside the United States at times do arise. Articles on this subject appeared in Federation publications as early as the 1930s⁵ and have continued in recent years, the most notable of which was an editorial by senior leadership at the Association of American Medical Colleges (AAMC).⁶ The issues described then mirror a basic task facing medical boards today, i.e., assessing the qualifications of physicians who graduated from medical schools located outside the United States.

Public expectations and statutory language mandate the need for state medical boards to ascertain the qualifications of individuals presenting themselves for initial medical licensure. Assessing the quality of education provided by the licensee's medical school is an inherent part of this licensure process. The challenge for medical boards is the lack of an accreditation system for all international medical schools comparable to that

of the LCME or AOA for U.S. schools. Absent a comparable accreditation system, state medical boards are left without uniform standards for determining the quality of the medical education provided to its potential licensees.

In recent years, a number of factors are renewing state medical boards' focus on this issue.

- The number of U.S. citizens attending medical schools outside the United States—presumably with the intention of returning to this country to obtain licensure—appears to be increasing. The number of U.S. citizens obtaining ECFMG certification has doubled over the past decade from 527 in 1995 to 1,360 in 2004. U.S. citizens as a percentage of all individuals certified by the Educational Commission for Foreign Medical Graduates (ECFMG) rose from 9% in 1998 to more than 20% throughout the period 1999-2004.⁷
- Graduates of international medical schools (IMGs) supply approximately 26% of the current physician workforce in the United States. Demographic projections suggest that the U.S. will experience a shortage of physicians within the next 15 years. This shortage will likely be met, at least in part, by an increased reliance upon the IMG community to meet the medical needs of this country's population.
- The number of medical schools worldwide continues to increase, including proprietary schools located in the Caribbean that are heavily dependent upon U.S. citizens for much of their enrollment.
- Some proprietary medical schools utilize non-traditional educational practices, e.g., no formal examinations for admission, awarding credit for prior experience in related health care professions, granting credit hours based upon limited on-site education.
- State medical boards lack the resources to conduct a thorough evaluation of the curriculum and operations of individual international medical schools whose educational practices may be in question.

With these factors in mind, state medical boards' questions relative to licensing graduates of international medical schools are understandable. With a fundamental charge that includes public protection, state medical boards sometimes receive mixed messages on this topic. While some members of the public would call for closer scrutiny of licensees from international medical schools, others urge caution lest heightened scrutiny or added requirements result in delays in licensing physicians or reducing the licensee population, a particularly important public issue for those regions facing a shortage and/or maldistribution of physicians and one that will only become more critical if the current demographic projections of a physician shortage hold true. 10,11,12

Other pressures can arise in states where specific medical schools have been identified as failing to meet adequate standards for providing medical education and have been added to a list of non-approved schools whose graduates are not eligible for licensure in that jurisdiction. Several boards reported pressure from residency programs to either allow the program to accept physicians from non-approved schools or revise the board's listing of acceptable medical schools whose graduates can be licensed in their jurisdiction.

Current Environment

Accreditation

Accreditation is a peer-review process designed to attest to the educational quality of new and established educational programs and is one of the primary processes ensuring the quality of higher education in the United States. An accrediting body evaluates those complete and independent medical education programs leading to the M.D. or D.O. degrees. In the United States, the LCME and the AOA are recognized by the U.S. Department of Education as the accrediting bodies for medical education programs. By judging the

compliance of medical education programs with nationally accepted standards of educational quality, an accrediting body serves the interest of the general public and of the students enrolled in those programs.

The accreditation process requires educational programs to provide assurances that their graduates exhibit general professional competencies that are appropriate for entry to the next stage of their training, and that serve as the foundation for life-long learning and proficient delivery of medical care. Additionally, accreditation signifies that a medical institution has met or exceeded standards for educational quality with respect to mission, goals and objectives; governance, administration and finance; facilities, equipment, and resources; faculty; student admissions, performance and evaluation; pre-clinical and clinical curriculum; and research and scholarly activity. The process of accreditation is a cooperative activity calling for continuing self-assessment by a medical institution, periodic peer evaluation through on-site visits and other reviews directed by an accrediting body.

The accreditation standards and processes of the LCME and the AOA play a significant, and in some ways unique, role toward ensuring the quality of medical education provided in the United States. Formal accreditation of medical education programs is absent from many other nations of the world. Even in those countries where accreditation systems are in place, it is difficult to establish equivalency with U.S. accreditation standards. For example, the U.S. Department of Education permits federal student loans to U.S. citizens attending foreign schools under certain conditions. The Department of Education's National Commission on Foreign Medical Education and Accreditation (NCFMEA) has been charged to review the standards and processes used by a foreign country to accredit their schools and determine if the standards used by that country are comparable to those used by the LCME for accreditation. Of those nations requesting a comparability determination from the NCFMEA, 26 have been determined to have comparable standards; another 31 countries have been determined not to have comparable standards for accreditation.¹³

In making decisions on comparability, the NCFMEA uses some, but not all, of the standards and procedures of the LCME. Accredited U.S. medical schools must engage in institutional self-study that focuses on measuring outcomes to determine the ongoing effectiveness of the school in meeting its educational objectives. This quality assurance element is not represented in the NCFMEA assessment of comparability.⁶

The accreditation review process can be a resource intensive endeavor even when undertaken on a local or regional level. This perhaps explains, in part, the lack of any international accrediting body for all medical education programs. At present, there are several initiatives underway by various entities that bear upon the quality and/or standards for international medical education. One initiative involves the World Health Organization (WHO) and the World Federation for Medical Education (WFME) who have embarked on a strategic partnership to pursue a long-term plan toward improving medical education. To that end, they have created a trilogy of documents dealing with global improvements in three areas of medical education: undergraduate, graduate and continuing education. Their document on undergraduate medical education "Basic Medical Education: Global Standards for Quality Improvement" is not an accreditation instrument per se according to the WFME. However, the WFME acknowledges the document's appropriateness as a template that could be used by national accrediting bodies for developing acceptable standards for accreditation.¹⁴

Another effort underway currently is a joint initiative between the ECFMG's Foundation for Advancement of International Medical Education and Research (FAIMER) and the Association of American Medical Colleges (AAMC) to gather and disseminate information about the nineteen medical schools that produce the largest number of U.S. IMGs seeking ECFMG certification and medical licensure in the United States.

While the motives behind the formation of an independent body for accrediting international medical schools is laudable, the obstacles to creating and implementing such an organization are significant.

Curriculum Structure of U.S. Medical School Programs

Medical education and practice in the United States differ from that of most other nations. In the majority of instances, the baccalaureate degree is a de facto requirement for entry into an LCME- or AOA-accredited medical school program though some exceptions exist, e.g., students engaged in a dual degree (BS/MD) program. Students present these credentials of potential and achievement as part of a competitive, selective process for admission to an accredited four-year U.S. medical school. This 4+4 model for American medical education is perhaps atypical when compared with the approaches adopted by other nations. In most other countries, pre-medical and medical education are rolled together into a program that often runs approximately six years.

The first two years of medical education at an LCME- or AOA-accredited program include an average of 38 weeks of instruction in year one and 37 weeks in year two. 15 The course of study focuses on basic medical sciences including human anatomy, physiology, biochemistry, pharmacology, microbiology and immunology, pathology and behavioral science. In some states, the required educational content leading to a medical degree is described in statute or code.*

Clinical Clerkships

One of the common features of the 4-year educational program as it is traditionally structured in LCME-and AOA-accredited medical schools is the 2+2 construct centered around two years of basic medical science instruction followed by two years of clinical clerkships. For LCME- and AOA-accredited programs, these clinical clerkships are conducted with affiliated teaching hospitals. Students enrolled in these programs complete approximately 47 weeks of instructions in year three and 35 weeks in year four. This includes core clerkships in family and internal medicine, neurology, obstetrics-gynecology, pediatrics, surgery, etc. ¹⁵ The clerkships are conducted within the context of a teaching hospital with which the medical school has an affiliation or formal agreement for instruction of its students.

For international medical schools, particularly those catering to U.S. citizens, a more common scenario involves a two-year curriculum of basic medical sciences followed by the student completing clinical clerkships in another country. In many cases the clerkships are conducted in hospitals unaffiliated with the medical school; therefore, the level of supervision and instruction provided to the medical student can vary widely.

The number of medical boards that have language covering licensure requirements relative to clinical clerkships is small. New York state appears to be unique in its formal process for allowing students from approved international medical schools to participate in extended (12 weeks or longer) clinical clerkships in hospitals within its jurisdiction. A site visit to the medical school and its facilities, a review of the schools' pre-clinical program and an approved affiliation agreement between the school and a New York teaching hospital are all required as part of New York state's process for regulating clinical clerks from unregistered and/or unaccredited medical school programs.

For those boards that do have regulations or rules relative to clinical clerkships, these are often part of the license application requirements that provide clinical clerkship information for the evaluation of the quality of their clinical clerkships. Only a few boards primary source verify either the non-accredited LCME or AOA institution's clinical clerkships (U.S. or international medical school clinical clerkships), or the affiliation agreement between an international medical school and a teaching hospital with an LCME-accredited clerkship program. The few boards that have attempted to primary source verify clinical clerkships report great

^{*} Florida Department of Health Administrative Rules offer one model for those licensing boards interested in codifying the outlines of an acceptable medical education leading to an M.D. degree. (FL DOH Admin Rules 64B8-15.007 through 15.009)

difficulty in obtaining this information from international medical schools, causing significant delays in the licensure process. It is not surprising that fewer than half a dozen medical boards verify clinical clerkship information for licensure candidates and that some among these are considering discontinuing the practice.

Residency Training

Graduate medical education (GME) in the United States involves more than 7,900 residency-training programs and 100,000 resident physicians. ¹⁶ Residency training programs in the United States are approved by either the Accreditation Council for Graduate Medical Education (ACGME) or the AOA. IMGs continue to comprise approximately 26% of the total number of physicians enrolled in GME.2 Many of these physicians come under the purview of a state medical board by virtue of a resident or training license.

One commonly used means by which medical boards offset the lack of accreditation for international medical schools is by requiring additional residency training for IMG licensure candidates beyond hat required for graduates of LCME-accredited medical school programs. Currently, 39 out of 55 allopathic and composite boards require additional training for IMG candidates for licensure.¹⁷

Role and Purpose of ECFMG in Certifying International Medical Graduates (IMGs)

One of the primary tools utilized by state medical boards in evaluating the credentials and qualifications of IMGs for licensure is certification by the ECFMG which assesses the readiness of international medical graduates to enter residency or fellowship programs in the U.S. that are accredited by the ACGME. All allopathic and composite medical boards today require IMG candidates for licensure to hold either an ECFMG certificate or to have completed a Fifth Pathway program.

Requirements for obtaining ECFMG certification include:

- Completion of 4 credit years at a medical school listed in the International Medical Education Directory (IMED)
- Verification of medical education credentials
- Successful completion of the United States Medical Licensing ExaminationÔ (USMLEÔ) Step 1 and Step 2, including both the Clinical Knowledge (CK) and Clinical Skills (CS) components.

Because the ECFMG serves such an important role in the evaluation for licensure of the IMG population, it is important that residency programs and state medical boards understand the limitations of any inferences that can be drawn from ECFMG certification. First, it should be understood clearly that the ECFMG certifies individuals, not medical schools or their educational programs. This certification is designed to ensure the fitness of individual candidates to engage in graduate medical education in the United States. Second, while it is necessary for a physician's medical school to be listed in the IMED as a requirement of ECFMG certification, the inclusion of any medical school in the IMED is predicated solely upon recognition by the appropriate government agency (e.g., Ministry of Health) in the country where the school is located. Recognition by the appropriate government agency is not synonymous with accreditation; nor is it based, in all instances, upon an assessment of the educational content and quality provided by the medical school. Recognition may be a formal acknowledgement on the part of a governmental agency or ministry that the school exists and is located physically within its jurisdiction.

Findings

Sufficiency of the Current System

The special committee concluded that in many respects the requirements for initial medical licensure in the United States and the system for evaluating licensure candidates (both domestic and international) are stronger today than at any time in the past. Whereas twenty years ago it was possible to be licensed in some jurisdictions without having completed any graduate medical education, today, one to three years of GME is a standard requirement for initial licensure in all U.S. jurisdictions. The Similarly, whereas clinical and communication skills have not been assessed as part of any examination for licensure in nearly 40 years, the implementation in 2004 of a clinical skills component for both medical licensing examinations (the USMLE and the Comprehensive Osteopathic Medical Licensing Examination, i.e., COMLEX-USA) has strengthened state medical boards' assessment of initial licensure candidates.

Additionally, the ECFMG's incorporation of a clinical skills assessment in 1998 as part of its certification process resulted in a higher level of demonstrated cognitive performance among IMGs seeking residency training and licensure in the United States. Since the 1998 adoption of a clinical skills assessment as part of ECFMG certification, the performance of IMGs has improved steadily on the USMLE Step 1 and Step 2 CK. Performance of non-U.S. IMG first-takers on the Step 1 has risen from a 54% pass rate in 1998 rate to 70% in 2004 and from a 48% pass rate to 77% on Step 2 CK. While these percentages lag behind that of first-takers from U.S. and Canadian medical schools (90%+), the performance gap between the two groups has narrowed considerably in recent years.^{7,18}

The same cannot be said of U.S. IMG performance on Steps 1 and 2. U.S. IMG first-taker performance on Step 1 has declined since 1998 with 2004 seeing a 53% pass rate; their performance on Step 2 has improved but continues to lag behind non-U.S. IMGs with a 64% pass rate in 2004.^{7,18}

Research

In recent years, media attention has focused periodically on undergraduate medical education with particular attention paid to proprietary international medical schools, the use of non-traditional practices, and subsequent disciplinary rates among graduates of both U.S. and international medical school programs. ¹⁹ The committee conducted a limited review of disciplinary data gleaned from the FSMB's Board Action Data Bank as one element of its research. While this limited review revealed no meaningful statistical differences in disciplinary rates between graduates of accredited U.S. medical schools and graduates of non-U.S. medical schools, there was evidence of variation in disciplinary rates by geographic region and by individual school for both U.S. and international medical school programs.

Balancing Outcomes Versus Processes in Making Licensure Decisions

In evaluating physician credentials and issuing medical licenses, the special committee recognizes that state medical boards are engaged in a balancing act, one which forces them to balance issues of "outcome" (i.e., individuals) versus those involving "process" (i.e., systems for undergraduate and graduate medical education) in their decision-making.

It is clear that the medical profession in the United States values "process" as evidenced by the many formalized structures that exist to support the mission of providing quality medical education and training. From accreditation systems and medical educational associations (i.e., LCME, COCA, AAMC) to certifying agencies and professional councils for graduate medical education (ECFMG, AOA, ACGME) a broad array of entities

work together in complementary fashion to ensure the continued quality of medical education and training for future physicians.

The value of this "process" focus is evidenced by the fact that all state medical boards in this country require accreditation by the LCME or AOA for any graduate of a medical school program located in the U.S. or its territories. Process information (i.e., evidence speaking to the quality of education provided by the licensee's medical school), is desirable and complements the overall decision-making process for licensure. Ultimately, however, the function of a state medical board is to license individuals, not medical school programs.

State Board Methodologies for Licensing IMG Physicians

In evaluating the qualifications of IMG candidates for licensure, the special committee identified three approaches utilized by state medical boards. The approach maintained by an overwhelming majority of medical boards is one that relies upon ECFMG certification, successful completion of the USMLE and, usually, an additional 1-2 years of residency training beyond that required of graduates from LCME-accredited medical school programs.

It bears noting that while New York state maintains a list of "approved" international schools whose students may participate in extended clinical clerkships within their jurisdiction, this review and approval process is independent of the licensure decisions made by the New York State Board for Medicine. For licensure decisions, the New York board utilizes the approach outlined above.

A second approach is one involving the application of specific, time-based criteria for licensing graduates of international medical schools, e.g., the Kansas Board of Healing Arts requires that a school be in existence for "a sufficient number of years to ensure that an adequate program has been developed." The intent and rationale behind deferring the licensing of these schools' graduates is to allow sufficient time to lapse so that in the interval the medical board might arrive at some conclusion regarding the viability of the school and the quality of education it provides.

The third approach is the creation and maintenance of lists of "approved" international medical schools whose graduates may be licensed in the United States. The American Medical Association's Council on Medical Education first published such a list in 1950 that included recommended schools whose graduates should be considered comparable to graduates of LCME-accredited schools. The effort was abandoned within ten years due to concerns for cost, fairness, and legal defensibility. By the late 1960s several states were experimenting with similar lists of "approved" schools.²⁰ Today, the Medical Board of California is the only licensing board actively maintaining such a listing of approved schools based upon a formalized review process and, for a small number of schools, actual site visits. (Note: New York's approval process deals solely with evaluating the pre-clinical education and clinical education in NYS affiliated hospitals provided by international medical schools for the purpose of permitting their students to engage in long-term clinical clerkships in New York state and should not be confused with the evaluation process utilized by California which relates to eligibility for licensure.) Currently at least six licensing boards follow California's lead in approving or denying licensure to candidates based, wholly or in part, upon the school's status on the California list.

Recommendations

In many ways, the systems and processes currently in place for the evaluation of physician preparedness for an initial medical license are stronger today than at any time in this nation's history. The accreditation, certification and approval processes relative to undergraduate and graduate medical education provide the public and licensing authorities with broad assurances for the quality of medical education and training provided in this country. The uniform requirement that physicians must successfully complete a minimum number of

year(s) in residency training in an approved program further assures state medical boards and the public of the competence of newly licensed physicians.

The addition of a clinical skills component to both major initial licensing examinations and the ECFMG certification process has raised the level of expectation for initial medical licensure in this country for both U.S. and international medical graduates. For the latter group, it appears that the introduction of a clinical skills assessment has resulted in an IMG pool that is stronger today in demonstrated cognitive knowledge and clinical skills than was the case a decade ago.

While the evaluative systems for licensure are stronger than ever, there is still room for improvement. The following recommendations are made with the intent that such measures will improve the quality of medicine in the United States.

Undergraduate Medical Education

The accreditation systems and processes in place through the LCME and the AOA assure state medical boards of the quality of medical education provided to their graduates. While some foreign countries have comparable systems in place for the accreditation of medical schools within their jurisdiction, a single accreditation system for evaluating the quality and rigor of all international medical schools does not exist, nor is one likely to in the near future. State medical boards have accommodated for this lack of a comparable accreditation system by relying upon a variety of sources for information on international medical schools, e.g., IMED, the NCFMEA's identification of nations with "comparable" accreditation systems, the California review system, etc. The following recommendations are designed to assist state medical boards in their evaluation of applicants (both IMG and domestic) for licensure.

Recommendations:

- 1. The FSMB should monitor closely efforts underway in various quarters to establish approval or accreditation mechanisms for international medical schools and provide support for these initiatives if appropriate.
- 2. State medical boards should review closely all statutes and regulations concerning medical licensure to ensure that no fundamental inconsistencies exist between any approval processes involving international medical schools and the requirements applicable to graduates of U.S. medical schools. For example, statutory or regulatory language that allows for the creation of a branch campus from an international school within the state's borders is likely to be inconsistent with (perhaps even contradictory to) the language most states have requiring that graduates of U.S. allopathic medical schools only be considered for licensure if their schools are accredited by the LCME.
- 3. Clinical clerkships for students enrolled in any medical school program should be conducted
 - a. in the same country as the host nation where the medical school is located physically, or
 - b. when conducted in another country outside of where the medical school is located, a written affiliation agreement exists between the medical school program and the teaching hospital where the clerkship occurs, and the clerkship has comparable standards to those conducted by LCMEor AOA-accredited medical school programs, or
 - c. within the context of a teaching hospital that features programs approved by the ACGME or the AOA, and with a written affiliation agreement between the medical school program and the teaching hospital within which the clerkships occur.

- 4. A national clearinghouse containing information and data on international medical schools will be developed as a mechanism for establishing quality indicators on these schools' performance.
 - a. The ECFMG and the FSMB are the organizations best positioned to collaborate in a clearing-house role as a supplement to the IMED. The two organizations should work together to expand the information contained in IMED and their joint quarterly e-publication, International Medical Education (*InMedEd*).²¹
 - b. Form a workgroup of representatives from state medical boards, the ECFMG and FSMB to develop a national clearinghouse.
 - c. Possible quality indicators include, but are not restricted to the following:
 - I. The number of years the medical school has been in operation.
 - II. Listing of any school policies related to providing advance standing for students entering from related health professions.
 - III. The degree to which distance learning (i.e., internet-based instruction) is utilized in the curriculum;
 - IV. FAIMER/AAMC survey information;
 - V. The status of the school as it appears in other review processes involving licensure (California review process), clinical clerkships (New York's clerkship approval list) and eligibility for federal student loans (NCFMEA).
 - VI. The amount of time in undergraduate medical education required by the school as culminating in a medical degree. (e.g., 32 months should represent a minimum acceptable standard.)
 - VII. Information on clinical clerkships, including whether these are performed outside the host country where the school is located, any hospitals with which affiliation agreements exist, etc.
 - VIII. Aggregate USMLE performance data for students and/or graduates of the school.
 - IX. Student rates for successful completion of courses.
 - X. The school's job placement success rate (i.e., placing its graduates in residency training programs and subsequent licensure).

Graduate Medical Education

As it is traditionally defined, the educational continuum for medicine includes undergraduate medical education, graduate training and continuing medical education. Because this educational continuum overlaps and intersects with medical licensure, undergraduate and graduate medical education are major partners in support of the mission of state medical boards to protect the public health by ensuring that qualified; competent physicians are entering the licensee ranks. Therefore, a fundamental obligation exists on the part of graduate medical education to assist state medical boards in their fundamental mission.

Recommendation:

1. The FSMB reaffirm its policy that physicians complete thirty-six months (36) of progressive post-graduate medical training as a condition of U.S. and IMG initial medical licensure, ²² that medical residents should be under the jurisdiction of the state medical board through a training or resident license, and that program directors should submit an annual report to that jurisdiction's medical board alerting the board to any resident physician involuntarily leaving the program, failing to advance for performance or behavioral reasons, whose duties have been restricted, etc.²³

Definitions/Glossary

Accreditation – The process by which an authorized agency or organization evaluates and recognizes a program of study or an institution as meeting certain predetermined qualifications or standards. Accreditation of U.S. allopathic medical school programs is performed by the Liaison Committee on Medical Education (LCME) and by the American Osteopathic Organization's Commission on Osteopathic College Accreditation (COCA) for osteopathic programs. Since the advent of the Higher Education Act in 1965, the LCME and the AOA have been recognized by the U.S. Department of Education as the authorities for the accreditation of programs of medical education leading to the M.D. and D.O. degree respectively.^{24,25}

Comparable – The extent to which two differing systems, processes or entities possess similar or dissimilar features. Comparability is a relative condition dependent largely upon the criteria selected as comparison points and is not to be confused with equivalency, which denotes equality.

Certification – The process by which a nongovernmental agency or association grants recognition to an individual who has met certain predetermined qualifications specified by that agency or association.

Clinical Clerkship – An organized supervised educational experience involving the examination and care of patients in the practice of medicine, which is an integral part of the clinical component of the medical curriculum and which takes place in a teaching hospital or an acceptable equivalent health care facility. This involves a series of supervised rotations of clinical instruction involving third and fourth year medical students that routinely covers core primary care areas such as Obstetrics and Gynecology, Pediatrics, General Surgery, Internal Medicine.

Fifth Pathway Program – A Fifth Pathway program is an academic year of supervised clinical education provided by an LCME-accredited medical school program that is substituted for an internship or social service requirement otherwise mandated for a diploma from some international medical schools. New York Medical College and Ponce Medical School (Puerto Rico) are the only Fifth Pathway programs operating in the United States today.

International Medical School – A medical school program located physically outside of Canada, the United States or its territories and not accredited by the LCME or the AOA.

Recognition – The formal acknowledgement and acceptance on the part of government or one of its agencies or ministries of the existence of a program or entity within its jurisdiction.

Undergraduate Medical Education (UME) – An educational program of at least 32 months leading to the M.D. (or its equivalent) degree or the D.O. degree.

Graduate Medical Education (GME) – A period of education and training (lasting 3 to 7 years) that physicians undergo after they graduate from medical school in order to learn how to care for patients in their chosen specialty. Physicians during graduate (i.e, residency) training care for patients under the supervision of physician faculty and participate in educational and research activities. Upon completion of a residency program, the physician is eligible to take their board certification examinations and begin practicing independently. Residency programs are sponsored by teaching hospitals, academic medical centers, health care systems and other institutions.

U.S. International Medical Graduates (U.S. IMG) – A citizen of the United States who graduates from a medical school located outside of the United States or its territories. These individuals are required to complete ECFMG certification (or a Fifth Pathway program, if applicable) in order to enter GME and to be licensed in the United States.

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Endnotes

- 1. The lone exception is San Juan Bautista School of Medicine located in Caguas, Puerto Rico.
- 2. Brotherton, SE, Rockey, PH, Etzel, SI. "U.S. Graduate Medical Education, 2003-2004." *JAMA* 2004; 292 (9):1032-1037.
- 3. Whitcomb, ME, Miller, R.S. "Participation of International Medical Graduates in Graduate Medical Education and Hospital Care for the Poor." *JAMA* 1995; 274(9):696-699.
- 4. Salsberg, E, Nolan, J. "The Posttraining Plans of International Medical Graduates and U.S. Medical Graduates in New York State." *JAMA* 2000; 283:1749-1750.
- 5. Pinkham, CB. "Foreign Medical Students" Federation Bulletin 1938; 24(5):132-143
- 6. Kassebaum, DG, Cohen, JJ. "Nonaccredited Medical Education in the United States." *New England Journal of Medicine* 2000; 342(21):1602-1605.
- 7. Educational Commission for Foreign Medical Graduates. *Annual Report* for 1998, 1999, 2000, 2001, 2002, 2003, 2004. Philadelphia, PA.
- 8. Cooper, Richard A. "Physician Migration: A Challenge for America, a Challenge for the World." *Journal of Continuing Education in the Health Professions* 2005; 25 (1):8-14
- 9. Cooper, Richard A. "The Expanding Scope of Practice of Non-Physician Clinicians and Implications for Medical Practice." *Medical Licensure in the 21st Century: Symposium Proceedings* September 6-7, 2000, Washington, D.C. Dallas, Texas: St. Barthelemy Press, 2002.
- 10. Association of American Medical Colleges. The Physician Workforce: Position Statement. Available at: http://www.aamc.org/workforce/12704workforce.pdf
- 11. Salsberg, E. The Physician Workforce Research Agenda: Expanding the Science, Enhancing the Impact. Presented at 2005 AAMC Physician Workforce Research Conference, Washington, D.C., May 5, 2005.
- 12. Blumenthal, D. "New Steam from an Old Cauldron The Physician-Supply Debate." *New England Journal of Medicine*, 2004; 350(17):1780-1787
- 13. The National Committee on Foreign Medical Education and Accreditation. Decisions of Comparability. Available at: http://www.ed.gov/about/bdscomm/list/ncfmea.html
- 14. Basic Medical Education: WFME Global Standards for Quality Improvement. WFME Office: University of Copenhagen, Denmark, 2003.
- 15. Baransky, B, Etzel, SI. "Educational Programs in U.S. Medical Schools, 2003-2004." *Academic Medicine* 2004; 292 (9):1025-1031.
- 16. Accreditation Council for Graduate Medical Education. ACGME at a Glance. Available at: http://www.acgme.org/acWebsite/newsRoom/newsRm_acGlance.asp
- 17. Federation of State Medical Boards. Initial Licensure Requirements. Available at: http://www.fsmb.org/usmle_eliinitial.html
- 18. The United States Medical Licensing Examination. USMLE Performance Data. Available at: http://www.usmle.org/scores/scores.htm

- 19. Jack Dolan. Hartford Courant News. "Getting an M.D. the Easy Way" December 15, 2003 and "Medical School Diploma Mills" December 30, 2005. Cheryl W. Thompson. *Washington Post*. "Special Treatment: Disciplining Doctors" April 10, 11, 12, 14, 2005.
- 20. Derbyshire, RC. Medical Licensure and Discipline in the United States. Baltimore, MD: Johns Hopkins Press, 1969.
- 21. Federation of State Medical Boards and Educational Commission for Foreign Medical Graduates. *International Medical Education Quarterly*. Available at: http://www.fsmb.org/pub_inmeded.html
- 22. Federation of State Medical Boards. *A Guide to the Essentials of a Modern Medical Practice Act*, Tenth Edition. Available at: http://www.fsmb.org/grpol_policydocs.html
- 23. The Federation of State Medical Boards. *Report on Licensure of Physicians Enrolled in Postgraduate Training Programs*. Available at: http://www.fsmb.org/grpol_policydocs.html
- 24. The Liaison Committee on Medical Education. The LCME Rules of Procedure. Available at: http://www.lcme.org/rulesofprocedure.htm#history.
- 25. The American Osteopathic Association. Accreditation and Program Approval. Available at: http://www.do-online.osteotech.org/index.cfm?PageID=acc_main