

June 2010

# FOREIGN MEDICAL SCHOOLS

Education Should Improve Monitoring of Schools That Participate in the Federal Student Loan Program



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#### Abbreviations

AAMC	Association of American Medical Colleges
ACGME	Accreditation Council for Graduate Medical Education
AMA	American Medical Association
ECFMG	Educational Commission for Foreign Medical
	Graduates
FFEL	Federal Family Education Loans
FSMB	Federation of State Medical Boards
HEAL	Health Education Assistance Loan
HHS	Health and Human Services
IMG	International Medical Graduate
MCAT	Medical College Admission Test
NBME	National Board of Medical Examiners
OB/GYN	Obstetrics and Gynecology
USMLE	United States Medical Licensing Exam

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United States Government Accountability Office Washington, DC 20548

June 28, 2010

The Honorable Tom Harkin Chairman The Honorable Michael B. Enzi Ranking Member Committee on Health, Education, Labor, and Pensions United States Senate

The Honorable George Miller Chairman The Honorable John P. Kline Ranking Member Committee on Education and Labor House of Representatives

Each year, the federal government makes a significant financial investment in the education and training of the U.S. physician workforce. A quarter of that physician workforce is composed of international medical graduates (IMG) and they include both U.S. citizens and foreign nationals. In fiscal year 2008, the federal government loaned \$633 million to U.S. students enrolled in foreign institutions—including medical students—through the Federal Family Education Loan (FFEL) program.<sup>1</sup> The government also makes a substantial domestic investment in the graduate training of the physician workforce. For example, in fiscal year 2008, federal support for residency training in the United States amounted to nearly \$9 billion. As with medical students educated in the United States, this training is required of all IMGs—U.S. citizens and foreign

<sup>&</sup>lt;sup>1</sup>Until recently, these student loans were made through the Federal Family Education Loan program, which was the only federal student financial aid program in which foreign schools could participate. Under newly enacted legislation, the SAFRA Act, which was included in the Health Care and Education Reconciliation Act of 2010, (Pub. L. No. 111-152 (2010)), the FFEL program will terminate June 30, 2010, after which no new loans will be made under the FFEL program. The SAFRA Act extends the availability of loans under the William D. Ford Federal Direct Loan (Direct Loan) program to students at eligible foreign institutions. Thus, beginning in July 2010, students at foreign medical schools will receive new loans through the Direct Loan program, instead of the FFEL program. Throughout this report we refer to the federal student loan program in our findings. Where our findings are specific to the FFEL program, however, we refer to that program by name.

nationals alike—who seek to practice medicine without supervision in the United States.

The Department of Education (Education), which administers the federal student loan program, must also monitor foreign schools that seek to participate in the program with respect to specific statutory requirements. Among these is the statutory requirement that at least 60 percent of their students who take the U.S. medical licensing exam must pass the exam. Most recently, Congress increased the pass rate to 75 percent, effective July 2010.

Little is known about IMGs with respect to how much they borrow overall, or the outcome of their medical studies, leading some policy makers to question the federal return on investment in IMGs. Therefore, Congress mandated that GAO study the performance of IMGs educated at these schools and other aspects of a foreign medical education, including the potential effect of the new 75 percent pass rate requirement on school participation in the federal loan program.<sup>2</sup>

This report examines the following questions:

- 1. What amount of federal student aid loan dollars has been awarded to U.S. students attending foreign medical schools?
- 2. What do the data show about the pass rates of international medical graduates on license examinations?
- 3. To what extent does Education monitor foreign medical schools' compliance with the pass rate required to participate in the federal student loan program?
- 4. What is known about schools' performance with regard to the institutional pass rate requirement?
- 5. What is known about where international medical graduates have obtained residencies in the United States and the types of medicine they practice?

<sup>&</sup>lt;sup>2</sup>Pub. L. No. 110-315, § 1101 (2008). A similar mandate was directed at the Department of Education's National Committee on Foreign Medical Education and Accreditation. The committee issued its report to Congress in 2009.

6. What is known about discipline and malpractice involving foreigneducated physicians?

On May 26 and 27, 2010, we briefed your staff on the final results of our analysis in addition to providing interim updates in February and March 2010. This report formally conveys the information provided during the briefing. (See app. I for the briefing slides.) In summary, we found the following:

- From 1998 to 2008, U.S. students enrolled at foreign medical schools borrowed \$1.5 billion in FFEL loans to attend free-standing medical schools.<sup>3</sup> Although this amount represents less than 1 percent of all federal student loans borrowed during this period, borrowing has grown significantly, in part because of increases in tuition, student enrollments, and the availability of additional loan funds for graduate and professional students.<sup>4</sup> Although our results are not generalizable, some students who participated in our focus groups estimated that their student loan debt would range from about \$90,000 to \$250,000 for their medical degree alone.<sup>5</sup> In addition, some student borrowers stated that they lack reliable cost and performance information about foreign medical schools.
- IMGs, as a group, have consistently passed their medical licensing exam at lower rates over the past decade than their U.S.-educated peers, but have narrowed this performance gap for most of the exam steps. In 1998, for example, average IMG pass rates on the clinical knowledge exam were 55 percent compared with 95 percent for U.S.-educated graduates. By 2008, however, IMG rates had increased to 82 percent while they remained about the same for U.S. graduates. IMGs still lag behind on the exam step for clinical skills—which involves interaction with patients with about a 26 percentage point difference in 2008. They also required

<sup>&</sup>lt;sup>3</sup>Another \$1 billion went to students attending foreign schools with a medical program; however, it is not known what portion of this amount was used to pursue a medical degree as opposed to some other discipline because the Department of Education does not track loan volume according to academic discipline.

<sup>&</sup>lt;sup>4</sup>GRADPlus loans are part of the federal student loan program and are non-need-based loans that graduate and professional students may borrow irrespective of their expected financial contributions to paying educational expenses. Funds borrowed are limited by other financial assistance received, such as other FFEL loans, and a student's cost of attendance.

<sup>&</sup>lt;sup>5</sup>By comparison, the median loan debt for students pursuing medical degrees in the United States was \$155,000 in 2008.

more attempts to pass the exam than their U.S.-educated counterparts. However, pass rates on the additional attempts were lower for both IMGs and U.S.-educated students compared with pass rates on initial attempts. Many factors are likely to have affected IMG pass rates, according to experts and others we interviewed, including students' proficiency in English and the extent to which foreign schools may or may not focus on preparing students for the exam.

- Education has not been able to fully enforce the institutional pass rate requirement needed for continued federal student loan eligibility. The three private organizations that administer each step of the exam have declined to release student scores on grounds that the data are proprietary in nature and should not be used for marketing purposes. As a result, Education reviews pass rates only when a school applies for the program, when it periodically seeks recertification, or when there is a change in ownership. More recently, however, two of the three testing organizations have begun negotiating with individual schools for the release of aggregate student performance data. On the basis of this development, Education officials told us that the department now plans to require pass rate data annually from all foreign medical schools participating in the federal loan program.
- Our own analysis of 2008 pass rate data of institutions located in countries that participate in the federal loan program indicates that while a majority of foreign medical schools in these countries met the current 60 percent student pass rate requirement, very few—11 percent—would likely meet the newly required 75 percent pass rate. Meanwhile, officials from the three testing organizations cautioned against associating student performance on the U.S. medical licensing exam with institutional quality, given the variability among students, the fact that some schools restrict who may sit for the exam, and that other schools may encourage practice runs.
- IMGs have entered into residency programs in all states, though they are concentrated in the eastern United States, and a larger proportion tend to practice in primary care than do U.S.-educated graduates. Nationwide, in academic year 2008-2009 there were 109,482 medical residents, over 30,000 of whom were IMGs (about 27 percent). Of this group of IMGs, about 78 percent were located in states east of the Mississippi, compared with 69 percent of all residents. The distribution of IMG residents by region shows the largest percentage in the Mid-Atlantic and the smallest

percentages in the Mountain states and Puerto Rico.<sup>6</sup> Several factors can affect the location of IMGs whether in residencies or in subsequent practice, such as the geographical distribution of residency programs, which are largely concentrated in the Mid-Atlantic region and in urban areas. With regard to medical practice, a larger proportion of IMGs go into residencies in primary care fields (68 percent compared to 37 percent of U.S. medical graduates in academic year 2008-2009). Moreover, IMGs increased as a percentage of all residents in core primary care fields (from 31 to 39 percent) between academic years 2001-2002 and 2008-2009.<sup>7</sup> Research shows that IMGs are also more likely than U.S.-educated graduates to practice as primary care physicians after finishing their residency training.

Overall, few significant differences exist between all IMGs and U.S.educated physicians with regard to either disciplinary actions that would
revoke or suspend their licenses or with regard to malpractice
payments<sup>8</sup>—and rates of disciplinary actions are low for physicians as a
whole. Our analysis of national data from 2004 to 2008 on license
revocation and suspension showed that IMGs accounted for a somewhat
larger proportion of these actions than would be expected based on their
share of the physician workforce overall, but it was not a statistically
significant difference. With regard to malpractice, which research suggests
is a weak indicator of physician competence; data on the whole suggest
little difference between IMGs and domestically educated graduates.

GAO is making several recommendations to the Department of Education concerning the lack of student consumer data on foreign medical institutions and also the department's monitoring of pass rates for foreign medical schools whose students take the U.S. medical licensing exam. Specifically, GAO recommends that the Secretary of Education

• collect consumer information, such as aggregate student debt level and graduation rates, from foreign medical schools participating in the

<sup>&</sup>lt;sup>6</sup>The Mid-Atlantic states are New Jersey, New York, and Pennsylvania. The Mountain states are Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

<sup>&</sup>lt;sup>7</sup>Core primary care specialties are internal medicine, family medicine, pediatrics, or internal medicine/pediatrics.

<sup>&</sup>lt;sup>8</sup> Malpractice payments are a monetary exchange as a result of a settlement or judgment of a written complaint or claim demanding payment based on a physician's provision of or failure to provide health care services, and may include, but is not limited to, the filing of a cause of action, based on the law of tort, brought in any State or Federal Court or other adjudicative body.

federal student loan program and make it publicly available to students and their families;

- require foreign medical schools to submit aggregate institutional pass rate data to the department annually;
- verify data submitted by schools, for example, by entering into a datasharing agreement with the testing organizations; and
- evaluate the potential impact of the 75 percent pass rate requirement on school participation in the federal student loan program and advise Congress on any needed revisions to the requirement.

For this report, we analyzed the Department of Education's loan data for all foreign medical schools participating in the FFEL program between academic years 1998 and 2008.9 To assess the performance of international medical graduates on licensing examinations, we analyzed trends in exam data from 1998 to 2008. We evaluated Education's monitoring of foreign medical schools' compliance with the minimum licensing exam pass rate requirement through interviews with agency officials and analysis of exam data at an institutional level. We also analyzed graduate medical education data and interviewed cognizant officials to ascertain where graduates obtained residencies and to identify their medical specialties. With regard to discipline and malpractice, we analyzed data from the Department of Health and Human Services, the Federation of State Medical Boards, and two states—California and Florida—with high populations of international medical graduates.<sup>10</sup> We also interviewed experts about the relevance and availability of these data. Because external data were significant to each of our research objectives, we assessed the reliability of the publicly and privately held data we obtained. We determined the data to be sufficiently reliable for the purposes of this report. Finally, we visited five stand-alone foreign medical schools in the Caribbean and Europe selected based on federal student loan volume and other institutional characteristics. At each school, we interviewed school officials and conducted student focus groups with a nongeneralizable sample of current students.

<sup>&</sup>lt;sup>9</sup>These academic years were chosen because they coincide with reauthorizations to the Higher Education Act of 1965.

<sup>&</sup>lt;sup>10</sup>Overall, we interviewed officials from four states—California, Florida, New Jersey, and New York—and conducted data reliability assessments of their disciplinary data. On the basis of the outcome of these assessments, we included data from California and Florida in this report.

	We conducted this performance audit from June 2009 to June 2010 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Our scope and methodology are discussed in greater detail in appendix II. Additional information related to our principal findings can be found in appendixes III-VI.
Agency Comments and Our Evaluation	We provided a draft of this report to the Departments of Education and Health and Human Services (HHS). We also shared relevant excerpts of the draft report with the private organizations that administer the licensing exams. Each of them provided technical comments which were incorporated into the report as appropriate. Education also provided additional comments which are reprinted in appendix VII.
	Education agreed with our recommendations and plans to collect consumer information on foreign medical schools. Education will also ask these schools to submit pass rate information starting with exams taken during the award year ending June 30, 2010, and will try to establish a mechanism to verify pass rates in cooperation with the private organizations that administer the exams. In addition, Education said that it has already begun evaluating the potential impact of the 75 percent pass rate requirement through proposed regulations, and that a notice of proposed rulemaking inviting public comment is scheduled to be published in summer 2010.
	In its comments, HHS noted that increasing the pass rate requirement will adversely affect federal student loan availability for future students attending foreign medical schools, adding that IMGs contribute a significant percentage of primary care residents in the United States.

If you or your staff have questions about this report, please contact George A. Scott at (202) 512-7215 or ScottG@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff members who made key contributions to this report are listed in appendix VIII.

Leorge A. Scott

George A. Scott Director, Education, Workforce, and Income Security

## Appendix I: Briefing Slides



	Accountability * Integrity * Reliability
Overview	
Introduction	
Objectives	
Scope and Methodology	
Summary of Findings	
Background	
Findings	









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Dis	cipline and Malpractice
F p r	Physicians—whether educated in the U.S. or abroad—who are licensed practice, may be subject to various disciplinary actions taken through st nedical boards, or hospitals, and other medical providers.
	o <b>License actions:</b> revocations, suspensions, or other restrictions on a physician's license based on a review by state medical boards.
	<ul> <li>Malpractice<sup>1</sup>: a finding of negligent care, related to services that a physicial provided or failed to provide.</li> </ul>
1. Re ad	search indicates that malpractice data are of limited value as an indicator of competence or negligence. Possibly no more than 3 percent of verse events result in malpractice claims. Moreover, of those that do, an estimated 40 percent are found not to have involved error or injury.

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Reliable Inform Performance	roup Participant ation on Likely L	s Reported That oan Debt and In	They Lacked stitutional
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<ul> <li>Many focus group</li> </ul>	participants said they	relied on student-drive	en websites to guid
their decision-ma	king.		
<ul> <li>their decision-ma</li> <li>According to ECF sophistication. Structure</li> <li>Comparison of Comparison of</li></ul>	KING. MG officials, IMG orie udents lack sources th	nted websites can vary at are objective and fac	r in both accuracy a ctual.
<ul> <li>their decision-ma</li> <li>According to ECF sophistication. Structure</li> <li>Comparison of Sources Available for Decision-making by</li> </ul>	King. MG officials, IMG orie udents lack sources th	nted websites can vary at are objective and fac	v in both accuracy a ctual.
<ul> <li>their decision-ma</li> <li>According to ECF sophistication. Structure</li> <li>Comparison of Sources Available for Decision-making by U.Seducated students and IMGs</li> </ul>	King. MG officials, IMG orie udents lack sources th	nted websites can vary at are objective and fac U.S. Medical Students Centralized medical college association website which allows comparison of several school websites	in both accuracy a ctual. IMGs Multiple school websites and student-led electronic bulletin boards
their decision-ma • According to ECF sophistication. Str Comparison of Sources Available for Decision-making by U.Seducated students and IMGs Source: GAO analysis of U.S. Department of Education	KING. MG officials, IMG orie udents lack sources th Admission Requirements Graduation Rates	nted websites can vary at are objective and fac U.S. Medical Students Centralized medical college association website which allows comparison of several school websites Medical college association	IMGs Multiple school websites and student-led electronic bulletin boards

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Rates of Disciplinary Action Are Low for Physicians Overall, Both for IMGs As A Group And for U.SEducated Graduates U.S. Graduates <sup>a</sup> + International Gradu Vercent of all hysicians Disciplinary action of all kinds <sup>b</sup> 1.3% 1.1%		
Both for IMGs As A Group And for U.SEducated Graduates	Rates of Disciplinary Acti	on Are Low for Physicians Overall,
U.S. Graduates <sup>a</sup> <b>+</b> International Gradu Percent of all hysicians 004-2008 Disciplinary action of all kinds <sup>b</sup> 992-2007 Source: Data on percentage of all physicians by IMG and U.Seducated status: American Medical Association (AMA) Physician Mass lata as analyzed and reported by the Association of American Medical Colleges (AAMC) for 2004 to 2008; discipline data: Federation State Medical Boards (FSMB) data prepared for the U.S. Department of Education for 1992-2007. Votes: a) Canadian medical graduates are counted as U.S. medical graduates for all analyses.	Both for IMGs As A Grou	p And for U.SEducated Graduates
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### Finding 6: Discipline and Malpractice

There Are No Significant Differences Nationwide with Regard to License Revocation and Suspension

National data on license revocations and suspensions for the most recent five years with complete data show that, while all IMGs represented about one-quarter of all physicians, they accounted for a somewhat larger share of these disciplinary actions.

These differences were not statistically significant when compared to the same disciplinary actions experienced by U.S.-educated physicians.

### NATIONWIDE (2004 to 2008)



Source: Data on percentage of all physicians by IMG and U.S.-educated status were obtained from AMA Physician Master File data as analyzed and reported by the AAMC. License revocation and suspension data were obtained through GAO analysis of FSMB data. Note: Canadian medical graduates are treated as U.S. medical graduates for all analyses.



Source: GAO analysis of state license revocation and suspension data, AMA Physician Master File data analyzed and reported by the AAMC. 36 Note: Canadian medical graduates are treated as U.S. medical graduates for all analyses.

Nationwide, IMGs I Share of Malpractic	Did Not Acc ce Payment	ount for A s in 2004-2	Disproportionate 2008 <sup>1</sup>
All Physicians IMGs made up 25 percent of all U.S. physicians from 2004 to 2008			and IMGs accounted for 25 percent of U.S. physicians with reported multiple malpractice payments from 2004 to 2008.
<b>Surgeons</b> IMGs made up 22 percent of all surgeons working in the U.S. in 2007			and IMGs accounted for 25 percent of U.S. surgeons with reported malpractice payments from 2004 to 2008.
Obstetricians/ Gynecologists IMGs made up 17 percent of all OB/GYNs working in the U.S. in 2007	nal Practitioner Data Bank.		and IMGs accounted for 18 percent <sup>2</sup> of U.S. OB/GYNs with reported malpractice payments from 2004 to 2008.









# Appendix II: Objectives, Scope, and Methodology

Objectives	Our review focused on the following questions: (1) What amount of federal student aid loan dollars has been awarded to U.S. students attending foreign medical schools? (2) What do the data show about the pass rates of international medical graduates on license examinations? (3) To what extent does Education monitor foreign medical schools' compliance with the pass rate required to participate in the federal student loan program? (4) What is known about schools' performance with regard to the institutional pass rate requirement? (5) What is known about where international medical graduates have obtained residencies in the United States and the types of medicine they practice? (6) What is known about discipline and malpractice involving foreign educated physicians?
Defining International Medical Graduates	With regard to the Federal Family Education Loan (FFEL) program, program requirements allow only U.S. citizens, nationals, permanent residents, and certain other eligible noncitizens to obtain these loans. In view of this fact, our findings for the first objective were limited to U.S. citizens, nationals, permanent residents, and certain other eligible noncitizens who were also IMGs. By contrast, our findings pertaining to the remaining objectives were based on all IMGs educated in medical schools abroad, including those students who are U.S. citizens or residents as well as students who are foreign nationals. For these objectives, we included graduates of Canadian medical schools in the total population of U.S. medical graduates. According to the body of literature we reviewed, Canadian schools are generally not considered to be foreign medical schools since their medical education system is closely comparable to that of the United States. Similarly, we included graduates of Puerto Rican medical schools in the total population of U.S. medical graduates because medical schools in Puerto Rico are subject to the same accreditation standards as other U.S. medical schools. In addition, our analyses excluded students in and graduates of osteopathic programs because only graduates of U.S. osteopathic schools are eligible to become licensed physicians in the United States.
Data Analysis by Objective	To determine the amount of federal student loan dollars borrowed abroad, we analyzed the Department of Education's loan data for all foreign medical schools participating in the FFEL program between academic years 1997-1998 and 2007-2008. <sup>1</sup> We also interviewed Education officials

<sup>1</sup>These academic years were chosen because they coincide with reauthorizations of the Higher Education Act of 1965.

about participation in the FFEL program as it relates to foreign medical schools and their graduates. To aid our discussion on this matter, we adopted the use of the department's nomenclature (i.e., free-standing institutions and component institutions).<sup>2</sup> We reviewed relevant federal laws and regulations that specify the conditions for compliance with the FFEL program. To understand how determinations of medical comparability are made for foreign countries and the impacts on institutional eligibility, we also observed a meeting of the Department of Education's National Committee on Foreign Medical Education and Accreditation during September 2009. This committee is charged with reviewing the standards that foreign countries use to accredit medical schools to determine whether those standards are comparable to those used to accredit medical schools in the United States. If a country is determined to have comparable medical accreditation standards (i.e., comparable countries), then accredited medical schools in that country may apply to participate in the FFEL program. Throughout this report we refer to the federal student loan program in our findings. Where our findings are specific to the FFEL program, however, we refer to that program by name.

To determine the performance of IMGs on licensing examinations, we analyzed medical licensing examination trend data covering the period 1998 through 2008. We interviewed officials of the Educational Commission for Foreign Medical Graduates (ECFMG) and the National Board of Medical Examiners (NBME) to better understand issues related to licensing examination pass rates and international medical graduates. We entered into an agreement with both of these institutions to obtain their medical licensing examination data. To analyze student achievement on medical licensing exams, we calculated pass rates by dividing the number of test takers who passed an exam step by the number of test takers who attempted this exam step in any given calendar year. We excluded data from our analysis when information that identified country and school location was missing. In addition, not all students who attend foreign medical schools are allowed to sit for the exam. To the extent that these students are not reflected in the total number of exam takers, our findings may be overstated. We also interviewed external stakeholders about factors that may affect IMGs' pass rates on the licensing exam. In

<sup>&</sup>lt;sup>2</sup>According to Education's definition, free-standing institutions are schools whose principal offering is medical education in contrast to component medical schools that are part of a larger university system.

addition, we reviewed literature on IMGs' performance on the U.S. medical licensing exam. We also obtained information at selected foreign medical schools from administrators and students about efforts to prepare students for the medical licensing exam.

To assess Education's monitoring of foreign medical schools' compliance with the licensing examination pass rate requirement, we interviewed Education officials about their monitoring activities and reviewed proposed rule changes to these activities. Additionally, we interviewed ECFMG and NBME officials about their efforts to share aggregate pass rate data with schools. On the basis of pass rate data we obtained from these organizations, we calculated the number of schools in comparable countries whose pass rates met or exceeded the 60 percent requirement for the 3-year period 2006 through 2008. Because school identities were masked in the data we received, we could not differentiate those schools that were FFEL participants from non-FFEL schools. We also looked theoretically at schools' performance on the medical licensing exam with regard to a 75 percent pass rate using 2006 through 2008 data.

To determine where international medical graduates obtained residencies and what medical specialties were practiced, we analyzed residency data collected by the Accreditation Council for Graduate Medical Education. We also interviewed HHS officials about geographic areas experiencing physician shortages, and what is known about the extent to which IMGs are practicing in these areas. We interviewed representatives of organizations and a small number of private, for-profit businesses that provide clinical and residency placement services to IMGs for a fee, as well as officials in North Dakota and Texas, who were identified as key information sources in the tracking of IMG residents in rural areas. We identified, obtained, and reviewed previous research on IMGs, including literature on geographic patterns of their field of practice, factors influencing specialty choice, participation in certain visa programs, and the extent to which IMGs practice in primary care and in underserved areas as compared with U. S. medical graduates.

To determine what is known about discipline and malpractice involving IMGs (i.e., physician discipline or license actions, as well as malpractice claims), we obtained and analyzed data for the years 2004 to 2008 from the Federation of State Medical Boards and HHS's National Practitioner Data Bank, as well as two states with high populations of IMGs (California and Florida). In addition, we calculated odds ratios and conducted tests to determine whether differences in discipline and malpractice rates between IMGs and U.S. medical graduates were statistically significant. We

considered such differences to be significant if they had less than a 5 percent chance of occurring from chance or random fluctuations. Disciplinary action or a malpractice payment<sup>3</sup> may occur throughout a physician's career. Because we did not analyze IMGs' or U.S. medical graduates' experience of disciplinary action or malpractice payments by age, date of medical school graduation, or date of licensure, the age distribution of the physicians reflected in our analyses is unknown. Our analysis of malpractice payments is limited to data reported to the National Practitioner Data Bank. While a wide variety of entities are required to report to the National Practitioner Data Bank—including state medical boards, health care facilities, and insurance companies-our analysis may nevertheless not reflect the full extent of medically adverse events. In addition, while we analyzed malpractice payments, we did not analyze the underlying cases to determine the extent to which they involved error or injury. We interviewed officials from three states about the licensing and discipline of physicians (California, Florida, and New York). We also interviewed several experts knowledgeable about physician discipline and malpractice litigation to determine what is known about IMGs' experience of these actions, and to better understand the value and limitations of discipline and malpractice data. We identified, obtained, and reviewed research on discipline and malpractice involving IMGs, as well as research that examined the relationship between malpractice and negligence, and research that compared IMGs with other physicians on selected measures of performance, such as compliance with professional standards.

## Data Reliability

Because external data were significant to each of our research objectives, we assessed the reliability of the publicly and privately held data obtained from federal departments, agencies, and associations.<sup>4</sup> To assess the reliability of each data set, we administered an automated survey form to each data manager or individual assigned primary oversight of the data. Each survey was specifically tailored to the system in question and addressed data uses, internal controls, and data entry practices. Once each

<sup>&</sup>lt;sup>3</sup>Malpractice payments are a monetary exchange as a result of a settlement or judgment of a written complaint or claim demanding payment based on a physician's provision of or failure to provide health care services, and may include, but is not limited to, the filing of a cause of action, based on the law of tort, brought in any State or Federal Court or other adjudicative body.

<sup>&</sup>lt;sup>4</sup>GAO, Assessing the Reliability of Computer-Processed Data, GAO-09-680G (Washington, D.C.: July, 2009).

	survey was completed, we reviewed responses to assess the adequacy of the internal controls and processes in place. In addition, we also tested the integrity of the electronic data we received by searching for possible outliers in the data, invalid variable values, and duplicate records. We determined that each data set was sufficiently reliable for the analytical purposes of this report.
Institutional Site Visits	To supplement our data collection and analysis, we conducted site visits to five foreign medical schools: American University of the Caribbean (St. Maarten), Ross University (Dominica), St. George's University (Grenada), Royal College of Surgeons (Ireland), and Poznan University of Medical Sciences (Poland). The schools were selected according to the following criteria: (1) countries deemed to be comparable by the National Committee on Foreign Medical Education and Accreditation with free- standing medical schools, (2) number of free-standing medical schools eligible to participate in the Federal Family Education Loan Program, as defined by the Department of Education, and (3) 2008 loan volume for these institutions, by country.
	For the site visits, we considered visits only to comparable countries with free-standing medical institutions eligible to participate in the FFEL program. The reason is that Education was not able to provide student enrollment data that distinguishes medical school students from all other academic disciplines at component medical schools. Therefore, by considering only free-standing institutions, we were able to determine a minimum number of medical school students who take out loans to attend a given institution. According to data provided by Education, there are a total of 21 free-standing institutions in 10 countries.
	The schools visited in the Caribbean represented 3 of the 4 largest institutions in terms of loan volume and students enrolled, and all were for-profit schools. To provide institutional diversity, we also selected two schools in Europe. While both institutions were not-for-profit, one school was a public institution and the other was a private institution. Both schools had smaller student loan volumes and enrollments than the schools in the Caribbean.
	At each selected school, we met with administrators and asked them to solicit participation of students to participate in focus groups. We conducted a total of eight focus groups that ranged in size from 4 to 14 participants. For each group, we specifically asked for U.S. citizens who also were federal student loan borrowers. We also allowed a few non-

	federal loan recipients as well as non-U.S. citizens to participate to provide additional perspective. A summary of focus group participants' responses captured during the focus groups can be found in appendix VI.
Literature Review	We also reviewed literature published from 1990 to 2009 that included research articles identified through 11 databases such as ERIC, PsycINFO, and Wilson Social Sciences Abstracts. To examine trends in students pursuing medical school abroad, we searched "foreign, medical school," "foreign medical graduates," "trends, physician supply," and other such terms. To examine the factors that influence international medical students' performance on medical licensing exams, we searched terms such as "U.S. medical licensing exam," and "licensing." We also reviewed relevant articles from the annual medical education issue of the <i>Journal of the American Medical Association</i> . We also included in our review articles that were identified by government officials and representatives of professional associations we interviewed. Our bibliography can be found at the end of the report.

## Appendix III: Comparison of Average Cost of Attendance at U.S. and Selected Foreign Medical Schools



Source: GAO analysis of institutional data and published American Association of Medical Colleges, based on academic year 2008-2009 data.

Notes: Expenses include such cost as room and board, books, transportation, and other miscellaneous costs identified by institutions, which may vary. Cost expressed in United States dollars.

# Appendix IV: Performance on Licensing Exam by Number of Attempts on Each Exam Step, and by Nationality of IMG

Figure 1: Licensing Exam Pass Rates by Number of Attempts on Each Exam Step, 1998 through 2008



Note: All test takers are referred to as "graduates"; however, students are also eligible to take the Step 1, Step 2 clinical knowledge, and Step 2 clinical skills exams while they are still enrolled in medical school. Percentages were not indicated for attempts with small numbers of test-takers.

Among IMGs themselves, pass rates for foreign IMGs have generally exceeded those for U.S. citizen IMGs on Step 1 and Step 2, Clinical Knowledge, although U.S. citizens have achieved higher pass rates on the Step 2 Clinical Skills exam and their lead on the Step 3 exam has steadily been decreasing. (See figs. 2 and 3.)

## Figure 2: Comparison of First-Time Pass Rates for U.S. Citizen IMGs and Foreign IMGs on Step 1 (Basic Science) and Step 2, Clinical Knowledge, 1998 through 2008



Sources: GAO analysis of Educational Commission for Foreign Medical Graduates and National Board of Medical Examiners data.

Note: All test takers are referred to as "graduates"; however, students are eligible to take the Step 1 and Step 2 clinical knowledge exams while they are still enrolled in medical school.





Sources: GAO analysis of Educational Commission for Foreign Medical Graduates and National Board of Medical Examiners data.

Notes: Test takers are referred to as "graduates"; however, students are also eligible to take the Step 2 clinical skills exam. This exam became a certification requirement on June 14, 2004, so pass rate data for the Step 2 clinical skills exam are available only for exam year 2004 and onward.

According to ECFMG and NBME officials, there has been a clinical skills exam requirement for ECFMG certification since July 1998. Prior to then, ECFMG administered the ECFMG Clinical Skills Assessment (CSA), starting in July 1998, as a requirement for ECFMG certification.

# Appendix V: International Medical Graduates and Residencies

### Table 1: Residency Programs by State, Academic Year 2008-2009

State	Number of programs	Percentage of all programs
Alabama	110	1.3
Alaska	1	0.0
Arizona	110	1.3
Arkansas	63	0.7
California	753	8.6
Colorado	94	1.1
Connecticut	159	1.8
District of Columbia	159	1.8
Delaware	27	0.3
Florida	293	3.4
Georgia	164	1.9
Hawaii	30	0.3
Idaho	4	0.0
Illinois	411	4.7
Indiana	100	1.1
lowa	80	0.9
Kansas	58	0.7
Kentucky	99	1.1
Louisiana	143	1.6
Maine	21	0.2
Maryland	214	2.5
Massachusetts	387	4.4
Michigan	347	4.0
Minnesota	174	2.0
Mississippi	43	0.5
Missouri	212	2.4
Montana	2	0.0
Nebraska	55	0.6
Nevada	18	0.2
New Hampshire	45	0.5
New Jersey	196	2.2
New Mexico	53	0.6
New York	1,105	12.7
North Carolina	247	2.8
North Dakota	7	0.1

State	Number of programs	Percentage of all programs
Ohio	447	5.1
Oklahoma	65	0.7
Oregon	74	0.8
Pennsylvania	569	6.5
Puerto Rico	67	0.8
Rhode Island	59	0.7
South Carolina	95	1.1
South Dakota	7	0.1
Tennessee	180	2.1
Texas	544	6.2
Utah	66	0.8
Vermont	35	0.4
Virginia	187	2.1
Washington	131	1.5
West Virginia	59	0.7
Wisconsin	163	1.9
Wyoming	2	0.0
Total	8,734	100

Source: GAO analysis of Accreditation Council for Graduate Medical Education (ACGME) data.



Figure 4: Percentage of IMGs in Residencies as a Percentage of All Residents by State, Academic Year 2008-2009

Sources: GAO analysis of Accreditation Council for Graduate Medical Education (ACGME) data; The National Atlas of the United States (map).

# Appendix VI: Summary of Responses by Focus Group Participants at the Five Foreign Medical Schools We Visited

Although findings are not generalizable to all U.S. students studying in foreign medical schools, we conducted focus groups with 82 enrolled U.S. citizens or permanent residents at five schools we visited to gain a better understanding of and perspective on students who attend foreign medical schools. Table 2 shows a summary of the number of students who participated in our focus groups by school.

### Table 2: Number of Participants in Student Focus Groups, by School

School	Number of focus groups conducted	Number of participants
School A	2	21
School B	2	19
School C	2	25
School D	1	7
School E	1	10
Total	8	82

Source: GAO analysis of focus group survey responses.

## Demographics

We obtained basic demographic information on students who participated in our focus groups to learn more about their year of medical school, gender, age, and citizenship status. This information has been included to provide some perspective on who participated in our focus groups; however, this information is not generalizable to all IMG students.

- Sixty-eight percent of the students who participated in our focus groups were enrolled in their second year of medical school abroad. Another 16 percent were in the first year of study.
- Sixty-six percent of participants were male and the remaining 39 percent were female.
- Almost half the participants were between the ages of 25 and 34.
- Over two-thirds of participants were U.S. citizens and 13 percent had dual citizenship with the United States and usually the country where the medical school was located.

Reasons for Attending a Foreign Medical School	We asked participants in our focus groups to tell us about some of the reasons they decided to pursue a medical education outside the United States and whether they had applied to any other medical schools. Table 3 summarizes our questions and the most frequent responses provided by participants in our focus groups.		
	Question	Most frequent responses by focus group participants	
	What are some of the reasons you decided to pursue your medical	Noncompetitive grade point average or Medical College Admission Test	
	education outside the U.S.?	Perceived as too old for U.S. medical schools	
		Not accepted into U.S. medical schools	
		<ul> <li>Did not want to wait another year to apply or retake admission test</li> </ul>	
		<ul> <li>Location of school/living abroad</li> </ul>	
		<ul> <li>Only opportunity to achieve goal of becoming a doctor</li> </ul>	
	What are some of the reasons you chose this medical school?	<ul> <li>Opportunity for clinical rotations in U.S with hospitals affiliated with the medical school</li> </ul>	
		School's reputation	
		<ul> <li>Accelerated program or other admissions requirements enable student to finish school quickly</li> </ul>	
		<ul> <li>Availability of federal financial aid or cost of attendance</li> </ul>	
	How did you learn or find out about	Internet (student-led bulletin boards)	
	this school?	Word of mouth through friends, family, other doctors	
	Did you apply to U.S. medical schools? If so, how many U. S. medical	Fifty-nine of the 82 students participating in the focus groups responded that they had initially applied to U.S. medical schools.	
	schools did you apply to?	Those attending School A: 6.6 schools	
		Those attending School B: 7.4 schools	
		Those attending School C: 12.6 schools	
		Those attending School D: 14.5 schools	
		Those attending School E: 4.2 schools	
	Were you accepted by a U.S. medical school?	Ten of the 82 participants who participated in our focus groups indicated that they had also been accepted by a U.S. medical school.	
	Other than the medical school you are enrolled in, did you apply to any other medical schools outside the U.S.?	Forty-four of the 82 focus group participants responded that they applied by another foreign medical school in addition to the school where they were enrolled.	

Source: GAO analysis of focus group survey responses.

Financing Medical Education	We asked focus group participants to assess the relative importance of various forms of financial aid to help finance their medical education. In addition, we asked them about the extent to which cost of attendance was a factor in their application decision. For those focus group participants who have received federal student loans, we also asked them about their experience in working with the school's financial aid office.
	Participants in our focus groups ranked the various financial aid sources in the following order, from most to least important:
	• federal student aid,
	• personal savings/family resources,
	• private loans,
	• scholarships, and
	Veterans Affairs Benefits/GI Bill
	While the cost of medical school was a factor in the application decision, the availability of federal financial aid was considered essential and without which students would not have been able to afford medical school. Some notable quotes included the following:
	• "My dream would have died without Department of Education loans."
	• "Federal assistance makes this possible. I am worried that the program will go away."
	• "Without federal loans, most of the students could not attend [school name]."
	• "It is vital to maintain this program that has not only been proven by the long history of graduates who have returned to the U.S., but also been shown to be necessary to help relieve the shortage of physicians in the United States."
	Several participants said that they lack consumer information on expected debt level, and that there is no reliable source of such information to help decide which medical school to attend.
	• One participant explicitly asked about the school's pass rate on the licensing exam but got a vague answer from school officials. "[Name of

	<ul> <li>school's] marketing statement says that the school's pass rate is 98 percent on Step 1. Even U.S. schools don't hit this mark. But [school name] only counts those students who actually sit for the exam and don't drop out. They warn you but only after you get here and sign for the loan. [I] would have no problem if they said it was cutthroat environment. [Your] eyes are open and you know what to expect. People drop left and right. You can be 25 years old, \$75,000 in debt, and [have to leave] in the 3rd semester with nothing. There should be truth in advertising schools should show their numbers. This is ethical. [I] knew a couple of students with families who failed out. [They] uprooted [their] life only to get creamed."</li> </ul>
	was a smooth process and that the school's financial aid office was very helpful in disbursing the aid on time, and in responding to students' inquiries. One participant noted that the school even requires students to obtain financial counseling before getting any loans.
Residency and Practice	We asked focus group participants about their plans to pursue a residency and also their long-term career plans.
	Almost all participants in our focus groups—69 of the 82—indicated that they would eventually return to the United States to either pursue a residency or practice medicine. While 54 of these 69 participants who said that they would eventually return to the United States indicated that they preferred to pursue a specialty during their residency, 41 indicated that they would also consider primary care as either their first choice or one of their choices. Three of the 69 participants stated they planned to go into research.
	Participants cited a number of factors to consider when deciding which field of medicine to practice, including scores on medical licensing exams, earnings potential (which affected ability to pay off student loans), physician workload, flexible schedule, and having to deal with health insurance companies. While most participants in our focus groups said they would like to go into a specialty, several acknowledged "the reality" that most graduates of foreign medical schools end up in primary care because residency slots in specialties are extremely competitive and limited.

	One participant stated, "At a time when there is an increased need for primary care physicians in the U.S., it should be noted that a substantial number of our graduates obtain primary care residencies."
	When talking specifically about where they hope to obtain a residency or eventually practice, most participants—69 of the 82—indicated they preferred to return to the South Atlantic states, and another 31 participants indicated that New England or the Mid-Atlantic states were also a possibility. Ten of the 82 participants told us that they had plans to serve in medically underserved communities or help specific ethnic populations.
	Among the factors influencing their residency decision were being close to family, desire to help underserved populations, whether the residency program accepted international medical graduates, and availability of loan forgiveness programs.
Quality of Instruction	We obtained focus group participants' perspectives on the quality of instruction at the school, including the benefits of attending a foreign medical school.
	Many participants said that, overall, the permanent professors were knowledgeable and accomplished, but a few students at some schools said that instruction provided by visiting professors varied in quality. A few notable quotes included the following:
	• "We do an evaluation at the end of the semester. I think they [i.e., the school] pay attention to that. If they [i.e., professors] are not good at teaching, you don't see them anymore."
	• "Quality is very high here. The rotations—doctors you're paired with, take the effort to teach. [That is] not the case in the U.S. [I] feel I'm learning more."
	• "All of the faculty are non-practicing. They are available all the time. They hold your hand more."
	• "In the U.S., many of the professors are practicing doctors or do research. It's different at [name of school]The emphasis is on teaching so that makes them more accessible."

	• "They [i.e., visiting professors] may really know a particular subject. They may really know the research, but when asked 'how,' they can't explain it."
	• "Teaching quality is highly variable. The awful ones were all visiting professors. They're here on vacation for 2-4 weeks from the U.S. [They were] brought only because [they] happened to be available, not because [they were] good. Visiting professors make up 20 percent of the faculty. Most have been coming here for years."
	Focus group participants at one school told us that they valued the campus' proximity to a teaching hospital and the resulting opportunities to gain early exposure to patients. In contrast, a focus group participant at another school commented that the school did not have a relationship with surrounding hospitals, which meant that students would have to wait for a clinical rotation to gain exposure to patients.
	Some focus group participants at for-profit institutions said that the instructional materials were covered quickly or that to prepare for medical licensing exams students needed to undertake self-study.
	Several focus group participants at one school said they would have liked to have information on student performance on the medical licensing exam to help them select which foreign medical school to attend.
	• Participants discussed various benefits of attending a foreign medical school that included interacting with a wide spectrum of patients, developing cultural sensitivity, and obtaining insights into different health care systems.
Quality of Educational Facilities	In addition to asking them to evaluate the quality of instruction, we asked focus group participants to comment on the quality of the educational facilities such as classrooms, laboratories, libraries, and equipment.
	We heard mixed comments regarding educational facilities and whether they adequately met students' needs. Some notable quotes included the following:
	• "Comparatively speaking to U.S. medical schools, classrooms are good with flat screens and projectors."
	• "The university has invested in some new buildings and these are equipped with state-of-the-art technology."
- "You can get video streaming of classes and online learning...but the system's been getting crowded."
- "Cadavers are an advantage. The number of cadavers available allows for very small groups of four students. Other schools often assign 12 students to a cadaver."
- "Great that they have access to cadavers. Many colleges do not have these."
- "The library is small but has all the books we need."
- "Library is horrible. Very poor electronic resources but large journal collection. Library is small given large student population."
- "[I'm] angry [that] pathology is important, [but] the microscopes are from 40 years ago."

Several focus group participants noted that class size was an issue and that the infrastructure was not keeping up with enrollment growth.

- "Classes [are] expanding faster than infrastructure. They try to keep up with it, but bigger classes affect individual attention, divert resources from other things, stretches resources."
- "Average class size is 500 students and increasing toward 600."
- "It may not take away from me to be in a big class. I don't go to class. Lectures are recorded and placed online for people to watch." [Student makes the choice to stay home and watch lectures and considers it a "waste of time to go to class".]
- "Teachers don't agree with the administration's decision to expand classes. [They think it is] unwieldy ... [and that there is] too much of a focus on business."
- "Feeling resentful of increase in enrollment without adequate infrastructure. [Name of school] is constantly expanding because it's a business. But people get what they need from the facilities."

Another participant provided the following contrasting perspective:

• "While it is certainly true that there has been recent expansion in class size, the quality of education has not been affected. I can honestly say that I have never felt that I did not have access to my instructors or

clinical tutors. It makes no difference to me if there are 100, 200, or 500 people in the lecture hall. What does matter is how many people are in my lab groups. For instance, my anatomy dissection group had four people in it [similar to or better than U.S. schools]...These sessions provide all students with ample opportunity for discussion and questions."

## Appendix VII: Comments from the U.S. Department of Education



Page 2-Mr. George A. Scott Recommendation 3: Verify data submitted by schools, for example by entering into a data sharing agreement with the testing organizations. Response: We agree with the recommendation. The Department should have a mechanism to verify the USMLE pass rate data received from foreign medical schools, although we note this will require the cooperation of the private organizations that administer the exams. To this end, we will again attempt to establish a data sharing agreement with those organizations. Recommendation 4: Evaluate the potential impact of the 75 percent pass rate requirement on school participation in the federal student loan program and advise Congress of any needed revisions to the requirement. Response: We agree with the recommendation. We have already begun to evaluate the potential impact of the 75 percent pass rate requirement on foreign medical schools through the development of regulations to implement the statutory requirement. The forthcoming Notice of Proposed Rulemaking (NPRM), scheduled for publication this summer, was developed through the negotiated rulemaking process. This process involved gathering input from the public through three public hearings and forming a negotiated rulemaking committee comprising individuals representing key stakeholder constituencies for issues related to foreign institutions participating in the federal student financial aid programs. The 75 percent pass rate provision received a significant amount of discussion, and the resulting NPRM will propose regulatory language to properly implement the statute, while addressing concerns raised by the negotiating committee. Public comment on the NPRM will provide the Department with additional information necessary for its continued evaluation, as will the collection and verification of pass rate data. I appreciate your examination of this important issue. The Department of Education is committed to the continued evaluation of foreign medical schools to effect the best use of federal student financial aid funds. Sincerely. æ David A. Bergeron Acting Deputy Assistant Secretary for Policy, Planning and Innovation Office of Postsecondary Education

## Appendix VIII: GAO Contact and Staff Acknowledgments

GAO Contact	George A. Scott, Director, (202) 512-7215 or <a href="mailto:scottg@gao.gov">scottg@gao.gov</a>
Staff Acknowledgments	In addition to the contact named above, Meeta Engle, Assistant Director; Carla Craddock, Analyst-in-Charge; James Bennett; Susan Bernstein; Alexander Galuten; Lauren Gilbertson; Kristen Jones; Mitchell Karpman; Kathleen King; Ruben Montes de Oca; Christopher Morehouse; Terry Richardson; and Cynthia Saunders and made key contributions to this report.

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