Foreign Physicians: Their Impact on U.S. Health Care

International migration aids domestic supply but raises issues of quality.

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Since antiquity the practice of the healing arts has been characterized by the free flow of physicians from one country to another. Until relatively recently the number of physician migrants was not large and the flow was predominantly from medically advanced centers to the less affluent areas of the world. But since World War II migration patterns have changed radically and rapidly. The tide of migration has been reversed and it is now overwhelmingly from developing to the more developed countries.

The number of medical school graduates seeking opportunities for practice or for advanced professional training elsewhere than in their homelands has skyrocketed. Gish, revising downward an earlier estimate, suggests that as many as 40,000 physicians a year take part in these international migrations (*1*). This is equivalent to about half the annual graduates of all the world's medical schools except those in the People's Republic of China. Data for other health professions are more fragmentary but evidence is accumulating that nurses, and dentists in somewhat lesser numbers, are being subjected to similar "push" and "pull" forces.

These migration phenomena have aroused the concern of both national and world health authorities (*2*). Member nations have asked the World Health Organization to undertake a detailed study of the international migration of physicians and other health personnel and to propose how that agency might best contribute to the strengthening of the world's health manpower resources (*3*). The Secretary-General of the United Nations has recently observed (*4*):

> The migration of highly trained persons is to a relatively few advanced nations having market economies . . . and provides these nations with a valuable resource for which they pay virtually nothing. . . . They augment at low cost their supply of trained personnel, particularly for critically important positions in the health services. The general availability to these advanced countries of highly trained immigrants has had a tendency to divert the attention of these countries from the need to expand their own supplies of highly trained persons—particularly in the health professions.

International migration patterns of physicians, as they affect the health manpower supply of the United States, have recently been reviewed (*5*). The outward flow of U.S. physicians is essentially insignificant; a study by the American Medical Association (AMA) of 1967 data showed less than 1 percent of physicians appearing in its national registry to be practicing outside of the United States, 2.7 percent if physicians serving in the military and U.S. possessions are included (*6*). Inmigration, however, has mounted in recent years to massive proportions. Foreign physicians seeking graduate educational experience or opportunity for medical practice in the United States may elect to enter this country as immigrants or as temporary visitors. As will be seen later, the two categories have come to be equally important to the subject of this discussion.

Another group, namely nationals of the United States who receive their medical degrees abroad, are also of interest in this context, although they do not constitute a significant fraction of the U.S. physician manpower supply. In 1970 fewer than 6000 native-born Americans with foreign medical credentials (exclusive of the small number who attended Canadian schools) were in practice in the United States. This is well under 2 percent of all U.S. M.D.'s and less than 10 percent of all foreign medical graduates (FMG's) in the United States (*7*). As many as 4000 U.S. citizens are estimated to be currently enrolled in foreign medical schools (*8*). This number is about equal to the total undergraduate enrollment of ten average-size U.S. medical schools. But medical school curricula abroad are of longer duration than comparable programs in this country and attrition rates are notoriously far higher, hence U.S. recipients of foreign medical degrees are fewer in number than overall enrollment figures may suggest. During the 10-year period 1963 to 1972, the number of U.S. alumni of foreign medical schools (other than Canadian medical schools) who were successful in gaining initial licensure to practice in the United States averaged only 260 a year (*8*). The U.S. nationals who seek medical educational opportunities abroad turn preponderantly to medical schools in Guadalajara, Bologna, and Madrid.

Two recently inaugurated programs —COTRANS (Coordinated Transfer Application System), under the auspices of the Association of American Medical Colleges, and the Fifth Pathway, developed by the Council on Medical Education of the American Medical Association—are designed to facilitate the absorption of U.S. nationals studying medicine abroad into the mainstream of American medical education and practice. In the 4-year period 1970 to 1973, 564 such students were accepted for transfer to advanced standing in U.S. medical schools through COTRANS (*9*). Fifth Pathway permits the substitution of an academic year of supervised clinical training sponsored by a U.S. medical school for the internship requirements of certain foreign medical schools; 12 of our domestic schools are now participating in the program, but there is still insufficient experience to determine how effectively it is working (*8*).

A recent sizable increase has been reported in the number of U.S. matriculants at the Autonomous University of Guadalajara (*10*). This is in part a

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Table 1. Number of physicians admitted to the United States each year, 1969 to 1973, by visa status at time of admission. [Data from (*30*)]

Category	1969	1970	1971	1972	1973	Total, 1969–1973
			Immigrant visas			
Third preference						
Admissions	761	544	564	540	676	3,085
Adjustments	126	166	557	840	948	2,637
Sixth preference						
Admissions	69	84	90	44	17	304
Adjustments	40	46	273	247	88	694
Total with occupational preference	996	840	1,484	1,671	1,729	6,720
Others	1,760	2,318	4,272	5,473	5,390	19,213
Total	2,756	3,158	5,756	7,144	7,119	25,933
			Nonimmigrant visas			
Distinguished merit and ability	62	83	178	231	350	904
Other temporary	20	100	47	25		192
Trainees	217	174	173	82	178	824
Exchange visitors	4,460	5,008	4,784	3,935	4,613	22,800
Transferees			9	10	25	44
Total	4,759	5,365	5,191	4,283	5,166	24,764

reflection of the increasing popularity of medicine as a vocational interest of American college students. Despite a significant and continuing expansion of medical student enrollment in existing U.S. schools and the establishment of new schools, the competition for educational opportunities has intensified markedly. In 1963, 9,063 individuals or about 51 percent of 17,668 applicants were accepted for admission to the 87 medical schools then in existence. For the class entering in September 1972, 13,757 or approximately 38 percent of the 36,135 applicants to 112 U.S. medical schools were accepted (*11*). These developments may presage further increases in the number of U.S. nationals seeking admission to medical schools abroad.

The generalization that the tide of medical migration is now overwhelmingly from the developing to the more developed countries does not apply to undergraduate medical training in the United States. As mentioned above, as many as 4000 U.S. citizens are enrolled in medical schools abroad; in contrast, during the academic year 1972–73 there were only 736 foreign nationals in U.S. medical schools, 1.6 percent of the total enrollment. Of these, 241 (1.7 percent of admissions) were members of the first-year class (*12*). Not all U.S. medical schools enroll foreign nationals; in 1971–72 only 67—four fewer than in the previous year—admitted new foreign matriculants. The largest number of these students, 88, came from the Americas (including 19 from Canada); Asia contributed 69, Europe 36, Africa 32, the Middle East 11, and Oceania 3. All but 20, however, held degrees from U.S. colleges. Applicants without preparatory education in the United States face almost insurmountable barriers to admission to our medical schools (*13*).

Table 2. Number of dentists admitted to the United States each year, 1969 to 1973, by visa status at time of admission. [Data from (*30*)]

Category	1969	1970	1971	1972	1973	Total, 1969–1973
			Immigrant visas			
Third preference						
Admissions	179	144	129	136	134	732
Adjustments	6	8	19	16	11	60
Sixth preference						
Admissions	3	3		1	1	8
Adjustments	8	1	2	4	3	18
Total with occupational preference	196	156	150	157	149	808
Others	204	217	231	267	245	1,164
Total	400	373	381	424	394	1,972
			Nonimmigrant visas			
Distinguished merit and ability	2	3	9	5	2	21
Other temporary		2	3		2	7
Trainees	1		1	2		4
Exchange visitors	56	47	30	32	58	223
Transferees			1	1	1	3
Total	59	52	44	40	63	258

Immigrant and Visiting FMG's

Data on foreign physicians receiving visas to enter or remain in the United States in each of the fiscal years from 1969 to 1973 are summarized in Table 1. The number of immigrant physicians (that is, receiving permanent visas) has risen markedly during this 5-year period, and since fiscal 1971 has exceeded the number receiving temporary (nonimmigrant) visas. In each of the two most recent fiscal years, the number of immigrant physicians has exceeded 7100. In 1963 it was 2093. Thus there has been almost a 350 percent increase in a 10-year period.

The number of nonimmigrant physicians admitted each year has fluctuated between 4000 and 6000 during the past 10 years. The largest group in this category is the "exchange visitors" who have come, under the terms of the Fulbright Educational Exchange Act of 1946, the Smith-Mundt Act of 1948, and subsequent amendments, for graduate medical training in U.S. hospitals, presumably to prepare themselves for a higher level of professional practice in their own countries. Since 1970 it has been possible for aliens, including physicians, to enter on temporary "H-1" visas either to receive training or to perform temporary services, provided that domestic manpower cannot be found to perform these services. Previously such visas were restricted to individuals of distinguished merit or ability who were to perform services of an exceptional nature in the United States. To date there has been only a modest increase in the number of physicians admitted with "H-1" visas.

The precipitous rise in physician immigrants is associated with two recent amendments to the U.S. Immigration Act applicable to all immigrants. The first, enacted in 1965 and taking full effect in 1968, terminated long-standing national quotas which had essentially barred immigration from East

Asian and Western Pacific countries and favored immigration from some European countries over others; the preferential treatment of nationalities was replaced by the assignment of preferential status to immigrants with close kin living in the United States or with professional ("third preference") and technical ("sixth preference") skills in short supply here. The second amendment (Public Law 91–225), enacted in 1970, permits an exchange visitor to apply for permanent resident status without first returning to his country of last residence, provided his visit was not originally financed by his own government or by the U.S. government, and provided also that our State Department has not determined in its "skills list" that medical skills are in short supply in the country where he had last permanent residence. This "skills list" was published in the *Federal Register* in April 1972 and applies only to exchange visitors entering the country after that date.

Tables 2 and 3 give comparable data for dentists and nurses. With few exceptions, state laws restrict the issuance of licenses to practice dentistry to graduates of U.S. dental schools. The new "H-1" provisions previously described seem to have been much to the liking of nurses.

It should be observed that the year in which an individual is "admitted" to the United States with an immigrant or permanent residence visa does not necessarily correspond with the year of actual entry. For example, an exchange visitor may enter the United States and remain here for a period of years in nonimmigrant status. Prior to the 1970 Immigration Act amendment he was required to return to his home country and remain there for 2 years before he would become eligible to reenter the United States as an immigrant. Some, provided they continued in a hospital training post, could remain as "visitors" for five or more years. A few, estimated at about 10 percent, successfully petitioned for a waiver of the residence requirement. Since 1971 exchange visitors, with certain exceptions referred to above, have been able to convert their visitor visas to permanent residence status immediately after their arrival in the United States. This prerogative, along with the preferential immigrant visa provisions for physicians, has all but eliminated the distinction between immigrant and nonimmigrant physicians. A recent study by the AMA Center for Health Services Research and Development shows that 84 percent of FMG's identified in the AMA registry as in the United States in 1963 could still be identified as residing in this country in 1971. Of FMG interns and residents, that is, in training status, in 1963, 74 percent were located in the United States 8 years later (*14*).

The impact of the inflow of physicians is reflected in several measurements of the aggregate domestic manpower supply. Each year the AMA reports on the total number of M.D.'s appearing in its national registry of physicians. In 1959 FMG's comprised 8.5 percent (20,575) of the total of 241,036 physicians so registered; as of 31 December 1972 the total had risen to 356,534 and the FMG component to 74,277 or 20.8 percent (*15*). Thus with a net total gain of 115,498 physicians, or 48 percent above the 1959 supply, the 53,702 increase of FMG's was 260 percent above the 1959 level. Moreover, the proportion of physicians licensed for the first time to practice medicine who are foreign medical graduates has shown a remarkable increase in recent years. In 1950, of the 6002 new additions to medical practice in the United States 308, or 5 percent, were foreign medical graduates. In contrast, in 1972, of the 14,476 newly licensed physicians 6661, or 46 percent, were FMG's. In 20 states FMG's made up 50 percent or more of the physicians licensed for the first time in 1972; in seven of these states FMG's comprised 75 percent or more of new medical licentiates that year (*16*).

Countries of Origin

As noted in an earlier review (*5*) marked changes are taking place in the sources of in-migrating physicians, particularly among those seeking permanent residence in the United States. Data are available both for country of last permanent residence and country of birth. In 1965, prior to the effective date of the Immigration Act amendment suspending national-origin quotas, 2012 immigrant physicians were ad-

Table 3. Number of nurses admitted to the United States each year, 1969 to 1973, by visa status at time of admission. [Data from (*30*)]

Category	1969	1970	1971	1972	1973	Total, 1969–1973
			Immigrant visas			
Third preference						
Admissions	617	728	984	961	823	4,113
Adjustments	109	123	276	527	433	1,468
Sixth preference						
Admissions	279	261	262	167	40	1,009
Adjustments	73	52	108	202	78	513
Total with occupational preference	1,078	1,164	1,630	1,857	1,374	7,103
Others	4,388	3,770	4,812	4,994	4,961	22,925
Total	5,466	4,934	6,442	6,851	6,335	30,028
			Nonimmigrant visas			
Distinguished merit and ability	3	7	716	1,486	2,673	4,885
Other temporary	16	30	19	17	22	104
Trainees	8	13	14	4	12	51
Exchange visitors	1,871	1,109	567	382	424	4,353
Transferees			5		2	7
Total	1,898	1,159	1,321	1,889	3,133	9,400

Table 4. Physicians admitted to the United States as immigrants, 1965 and 1972, by region of last permanent residence. [Data from (*31*)]

Region of last permanent residence	1965		1972	
	Number	Percent	Number	Percent
Europe	568	28.2	912	12.8
North and Central America	848	42.2	696	9.7
South America	348	17.3	263	3.7
Asia	205	10.2	4996	69.9
Africa	31	1.5	222	3.1
Other	12	0.6	55	0.8
Total	2012	100.0	7144	100.0

Table 5. Physicians admitted to the United States, 1972, by selected countries of birth and of last permanent residence. [Data from (*31*)]

Country of birth	Country of last permanent residence												
	Canada	China	Egypt	India	Iran	Korea	Pakistan	Philippines	Taiwan	Thailand	United Kingdom	Other	Total
Canada	100										2	1	103
China	29	60		1		2		9	118	1	3	51	274
Egypt	8		57				1		1		23	25	115
India	92		2	1410	2	1	67	1	1	1	179	46	1802
Iran	8	1	1	5	455		1				7	7	485
Korea	22	1				749			5		1	32	810
Pakistan	19	1		62			130			1	34	13	260
Philippines	39			1				770	3		1	17	831
Taiwan	5	3						1	315		1	8	333
Thailand	5							1		265		4	275
United Kingdom	15										50	12	77
Other	97	2	3	34	2	16	2		27		63	1533	1779
Total	439	68	63	1513	459	768	201	782	470	268	364	1749	7144

mitted. Of these, 28 percent were admitted from European countries, almost 50 percent from Western Hemisphere countries, and only 10 percent from Asia (Table 4). In contrast, in 1972, when 7144 physicians were admitted as immigrants, almost 70 percent came from Asia. The proportion from Europe fell to 12.8 percent and from Western Hemisphere countries to 13.4 percent. When these data are tabulated by country of birth rather than of last permanent residence, the proportions of European and Western Hemisphere physicians are each reduced to 9 percent and that of Asian-born physicians is increased to 78 percent. More than half of all physicians admitted as immigrants to the United States in 1972 were born in India, the Philippines, Korea, or Iran. When Taiwan, Thailand, the People's Republic of China, and Pakistan are added, these eight countries account for the birthplace of 71 percent of all physicians admitted as immigrants in that year.

In recent years the Division of Science Resources Studies, National Science Foundation, has included in its studies of scientific personnel from abroad combined tabulations of country of birth and country of last permanent residence (*17*). As shown in Table 5, there is evidence of substantial migrations between developing countries as well as from developing to the more advanced countries. For example, of 1802 physicians born in India who were admitted with immigrant visas in 1972, more than one in five had resided a year or more in some other country before coming to the United States. Only one-half of the 260 Pakistani physician immigrants were admitted directly from their country of birth. Physicians born on the mainland of China also followed varied routes of migration to the United States; less than one in four of those gaining immigrant status in 1972 came to the United States without residing for a year or more in a country other than the People's Republic of China.

Neither the United Kingdom nor Canada is at present a substantial primary source of medical manpower for the U.S. health care system. Viewed from the U.S. perspective these two nations have become way stations for physicians migrating to the United States. In 1972, 439 immigrant FMG's listed Canada as the country of their last permanent residence but only 100 of these were natives of that country; the rest were natives of no less than 58 other countries. Another three Canadian-born physicians entered the United States from other countries. In that same year 364 immigrant physicians entered from the United Kingdom, only 50 of whom were born in the United Kingdom, the others being natives of 40 different countries. Another 27 U.K.-born physicians entered the United States after permanent residence in other countries. In the aggregate, the 7144 foreign medical graduates who were admitted as immigrants in 1972 came from 111 different countries—27 European, 32 Western Hemisphere, 17 African, 33 Asian, and 2 Western Pacific countries.

Table 6 shows the trends of physician immigration from Canada and the United Kingdom during the period 1965 to 1972 according to country of last permanent residence and country of birth. During the first 3 years of this period, about two in five immigrant physicians from Canada were Canadian born, but in the three most recent years the proportion has fallen to one in five. Comparable figures for the United Kingdom were four in five and now are one in four.

Impact of FMG's on the U.S. Health Care System

The increased inflow of FMG's into the U.S. health care system in recent years and the accelerating rate of new additions raise critical issues concerning (i) the "skill drain" on developing countries of the world, particularly in Southeast Asia but not limited to that region, and (ii) the immediate and long-range impact of these foreign-trained physicians on the quantity and quality of medical care available to the American public. For the last 10 years the combined total of immigrant and exchange visitor physicians entering the country has approximated the aggregate number of graduates of domestic schools of medicine and osteopathy.

The "skill drain," although arousing increasing international attention and conflicting with customary interpretations of U.S. foreign assistance policies, is not considered directly in this presentation. Further discussion will be restricted to some of the domestic implications, namely, to measurements of professional competence as indicators of the quality of medical care provided by graduates of foreign medical schools and to the distribution of foreign medical graduates, geographically and by

specialty, in the U.S. health care system.

Standards of medical education and the curriculum content of medical training programs, as these relate to U.S. concepts, vary greatly from country to country and from one medical school to another within the same country. The World Health Organization lists 961 medical schools in operation throughout the world (*18*); in 1972 state licensure boards in the United States examined candidates who were graduates of about 400 medical schools located in at least 50 foreign countries (*16*). It is not surprising then that FMG's coming to the United States demonstrate wide ranges of professional competence. On the one hand, some meet the most exacting standards of professional qualification required for academic appointment to U.S. medical schools. In 1968, of 12,867 physicians holding full-time faculty positions in U.S. medical schools 2,295 (18 percent) received their medical degrees from universities outside the United States (*19*). During the past 40 years 17 physicians engaged in medical research in the United States have been designated as Nobel laureates; six had received their medical degrees elsewhere than in this country. At the opposite extreme there are now in the United States a large number of FMG's, estimated in the range of 10,000, who are not legally qualified for the independent practice of medicine because of their inability to pass state medical licensure examinations or the examination of the Educational Council for Foreign Medical Graduates (ECFMG), a basic requirement for appointment to AMA-approved internship or residency training programs (*20*). These individuals are accumulating in a variety of health care posts, as for example in state chronic disease and mental institutions where full and unrestricted licensure requirements for physicians have been waived. Presumably such physicians are under qualified professional supervision, but in many reported instances such supervision is no more than nominal.

Most FMG's in the United States are distributed between these two widely separated extremes of professional competence. Evidence suggests that this distribution is heavily weighted near the lower range of acceptable professional competence. For example, on ECFMG examinations only 35 to 40 percent achieve a passing score on first attempt; ultimately two out of three candidates do so (*21*). Assessments of professional competence based on performance on ECFMG examinations have been challenged justifiably on several grounds. However, highly comparable data have recently become available through the Federation Licensure Examination (FLEX). In the 5-year period 1968 to 1972, this examination has been administered to over 27,000 candidates for medical licensure in one or another of the states then participating in this program. About three-quarters of the candidates were FMG's. Their failure rate was 50 percent, whereas the failure rate of U.S. medical graduates (USMG's) sitting concurrently for this standardized, objective-type, machine-graded examination was 15 percent (*22*).

Table 6. Physicians admitted to the United States as immigrants from Canada and the United Kingdom, 1965 to 1972. [Data from (*31*)]

Year	Country of last permanent residence		Country of birth		All physician immigrants
	Canada	United Kingdom	Canada	United Kingdom	
1965	380	147	199	133	2,012
1966	393	187	141	152	2,549
1967	449	206	135	128	3,325
1968	325	121	105	111	3,060
1969	236	140	52	45	2,756
1970	240	192	46	77	3,155
1971	478	268	66	58	5,756
1972	439	364	103	77	7,144
Total	2,940	1,625	847	781	29,757

At least one American medical specialty board has voiced concern because FMG's prepared for specialty qualifying examinations under favorable conditions, that is, in university hospitals, do less well than U.S. and Canadian medical graduates. In the 7-year period 1962 to 1968 about three out of four of the latter group passed the written part of this qualifying procedure on initial examination; only one in three of the former group did so (*23*). Of candidates trained in so-called community hospitals, 44 percent of U.S. and Canadian medical graduates pass the same written examination; only 16 percent of the other FMG's do so. These differences are attributed "not only to the degree of excellence of the residency program but to the competence of a candidate at the time of institution of his postdoctoral training" (*24*).

The American Board of Medical Specialties has sought to supplement such data with comparable assessments of the performance of FMG's on examinations offered by other of its 22 member boards. Nine additional boards have provided information for examinations conducted in 1972 or 1973. Again the contrast between the performance of FMG's and of U.S. and Canadian medical graduates is striking. About half of the former but only 13 percent of the latter did not achieve a passing score on the initial written examination. Considerable variation occurs between boards on pass/fail performance both for USMG's and FMG's, but for these nine boards, FMG's as a group had four times the failure rate of their American or Canadian counterparts (*25*). Candidates for these examinations had already fulfilled board requirements of two or more years of supervised graduate training in the clinical setting of an approved residency program in the specialty. Thus these differences in examination performance, and by inference differences in professional competence, cannot readily be explained on the basis of unfamiliarity with subject content, examination techniques, or language; these results warrant further study.

Increasingly, public attention is being drawn to problems arising from the geographic concentration of the domestic health manpower supply and to the trend among practicing physicians toward greater and greater specialization at the expense of general practice and the delivery of primary patient care (*26*). In 1931, three out of every four physicians in the United States were engaged in general medical practice; today less than one in five devotes full time or even the major share of his time to this type of patient care. Has the large inpouring of physicians from abroad lessened these problems of geographic or specialty maldistribution?

Unfortunately, in both respects the trends among U.S. medical graduates are mirrored by FMG's. Over 75 percent of all FMG's in the United States in 1970 were concentrated in 12 of the 50 states, states with highly urbanized populations and where U.S. medical graduates are also inclined to congregate. Only one in nine was located in a community of 50,000 or less, an appreciably smaller fraction than the 18 percent of USMG's who have established themselves in such areas, where the demand for medical care is less well met than in more populous centers of the country (*7*).

In 1972, 14,476 physicians were licensed for the first time in one or another of the 50 states, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. Of these, 6,661 or 46 percent were FMG's. Half of the FMG's gaining initial licensure to practice medicine in the United States that year did so in one of four states—New York, Pennsylvania, Michigan, or Illinois. Eight states accounted for 72 percent of the FMG's licensed for the first time, 16 states for 87 percent. In the ten states with the lowest physician-population ratios, the total number of FMG's who received initial medical licensure was 106 (1.6 percent); in this same group of states 469 USMG's (6 percent of their total number) sought and received initial medical licensure (*17*).

With respect to specialty distribution, about 12 percent of FMG's and 19 percent of USMG's designate general practice as their primary interest. Comparable figures for medical specialties are FMG's 22 percent and USMG's 23 percent; for surgical specialties, 22 percent and 26 percent; and for other specialties 38 percent and 24 percent. In this last category anesthesiology, pathology, and physical medicine and rehabilitation are favored more by FMG's than by USMG's (*7*). These data, especially those for general practice, must be interpreted with some caution; as a group FMG's are younger than USMG's, and physicians identifying themselves as general practitioners are heavily concentrated in the older age groups.

Concentration of FMG's in Hospital Practice

A major force attracting FMG's to the United States has been generated by the rapid expansion of domestic hospital facilities and the consequent increase in the demand for professional personnel. Table 7 shows the growth of approved hospital internships and residencies over the past 22 years. Internships and residencies combined have increased 127 percent. During this same period the number of medical school graduates has increased by 70 percent. Some of the slack has been taken up by extending the period of hospital training, as is shown by a 95 percent increase in the number of positions filled by U.S. and Canadian medical graduates.

Stated differently, in 1950–51 there were 28,734 approved training positions in U.S. hospitals, of which 68 percent were filled by U.S. and Canadian graduates, 7 percent were filled by FMG's, and 25 percent were vacant. In 1972–73 there were 65,308 such training posts, of which 58 percent were filled by U.S. and Canadian graduates, 28 percent were filled by FMG's, and 14 percent were vacant. Were hospitals to depend only on U.S. and Canadian medical school graduates to fill these positions, 42 percent of them would remain vacant.

Concurrently there has been a rapid expansion of other types of full-time graduate medical training programs in hospitals. In 1972–73 the AMA listed an additional 9,038 such posts, with 3,595 of them filled by FMG's (*8*). Thus in the aggregate there are 65,059 physicians currently in training status in U.S. hospitals, of whom 21,959 or 34 percent are FMG's (interns, 35 percent; residents, 32 percent; other trainees, 40 percent).

Full-time hospital-based practice has also been expanding and has proven highly attractive to FMG's. In 1970 about 9 percent of U.S.-trained physicians based their medical practice within a hospital; almost 18 percent of FMG's were similarly situated. Combining all categories of hospital-based practice, including in-training status, 48 percent of FMG's are engaged full time in this type of practice whereas only 21 percent of USMG's are so employed (*7*).

Table 7. Occupancy of AMA-approved internships and residencies, 1950–51 to 1972–73. [Data from (*8*), p. 939]

Year	Number of positions			
	Total offered	Filled by U.S. and Canadian graduates	Filled by foreign graduates	Vacant
		Internships		
1950–51	9,370	6,308	722	2,340
1955–56	11,616	7,744	1,859	2,013
1960–61	12,547	7,362	1,753	3,432
1965–66	12,954	7,309	2,361	3,284
1970–71	15,354	8,213	3,339	3,802
1972–73	13,650	7,239	3,924	2,487
		Residencies		
1950–51	19,364	13,145	1,350	4,869
1955–56	26,516	17,251	4,174	5,091
1960–61	32,786	20,265	8,182	4,339
1965–66	38,979	22,765	9,133	7,074
1970–71	46,584	26,495	12,968	7,121
1972–73	51,658	30,610	14,471	6,577
		Internships and residencies combined		
1950–51	28,734	19,453	2,072	7,209
1955–56	38,132	24,995	6,033	7,104
1960–61	45,333	27,627	9,935	7,771
1965–66	51,933	30,074	11,494	10,358
1970–71	61,938	34,708	16,307	10,923
1972–73	65,308	37,849	18,395	9,064

Roles of Federal Agencies

The problems (and issues) considered briefly above have ramifications falling within the purview or affecting the policies of multiple organizations and agencies both governmental and nongovernmental. At the federal level at least five governmental agencies have a "piece of the action." The Department of State is responsible for the administration of the exchange visitor program, a channel through which, since 1962, over 55,000 FMG's, largely from developing countries, have made their initial contact with American medical practice and American medical institutions. The Department of Labor is charged with administering the provisions of the Immigration Act which require the de-

termination of professions and categories of skilled workers in short supply and the formulation of regulations governing the granting of preferential immigration visas in these categories. Since 1962, 43,000 physicians have entered the United States as immigrants or have converted from temporary visitor to permanent resident by securing an immigrant visa. The Justice Department through its Immigration and Naturalization Service is involved in the day-to-day administration of immigration laws and regulations.

For the year 1972–73 the Veterans Administration (VA) has reported that some 1600 FMG's were receiving graduate medical training within its national network of hospitals (*8*). Thus almost one in ten of all FMG's enrolled in approved internship and residency training programs in that year were receiving such educational experience in whole or in part under VA auspices. Other federal hospital programs, including those maintained by the Department of Defense for military personnel and their dependents, are approved by the AMA for graduate medical training, but FMG's comprise a very small fraction of trainees in them.

To date the Department of Health, Education, and Welfare has played only a minor and relatively passive role in domestic programs which affect the admission of foreign medical graduates to the United States, their educational needs or opportunities, or their utilization and distribution in our health care system. The reason is that the department's health manpower authorities are concentrated on financial assistance to educational institutions offering training leading to initial professional qualification. During the 9-year period 1965 to 1973 it has awarded almost $1.3 billion of federal funds to U.S. schools of medicine and osteopathy to strengthen undergraduate medical education programs, increase enrollment, accelerate the educational process, and otherwise facilitate the training of adequate numbers of qualified physicians to meet the health care needs of the American public. As has been demonstrated above, programs directed toward the undergraduate phases of medical education have scant impact on the training of physicians who are not native to the United States.

The department has provided substantial financial support over a period of many years for the graduate training of physicians in highly specialized areas, most notably in biomedical research and in psychiatry. But here again, such assistance has been channeled largely through educational institutions whose concerns have by and large disregarded the rapidly expanding FMG component of our domestic physician supply. Since 1972 federal funds administered by the department have been specifically earmarked for the graduate training of physicians in primary medical care and family practice. Thus far funds available for such training have been small and limited to demonstration purposes. In view of the particular applicability of such training to health care needs abroad as well as in the United States, it will be of considerable interest to follow over the next few years the extent to which FMG's are enrolled in such programs. Currently, only 12 percent of filled family practice residency positions are occupied by FMG's; for all types of residencies the figure is 32 percent, and for at least five specialties it is 50 percent (*8*).

Also, under provisions of Titles 18 and 19 of the Social Security Act, the department underwrites a very sizable share of the cost to hospitals of salaries and other expenditures for services provided by interns, residents, and other full-time medical staff. In part such reimbursements include the cost of educational activities benefiting these hospital staff members, but there is little evidence that funds from this source are being or could be applied to meet the special educational needs of the 48 percent of all FMG's who are currently identified with hospital-based practice.

Concerning Standards

Foreign medical graduates have become a substantial fraction of the domestic physician supply, and their educational needs, at the graduate level of training, are of sizable moment. Greater national attention should be focused on this phase of their professional preparation for medical practice in the United States. The validity of such a proposal is fortified by the recently issued report of the Committee on Goals and Priorities of the National Board of Medical Examiners. That group of national authorities has recommended that the U.S. health care system replace the current double standard of eligibility for appointment to graduate medical training programs, one for USMG's and a lower one for FMG's, with a single high standard (*27*).

U.S. hospitals have been accused of exploiting FMG's who are now filling so substantial a fraction of their internship and residency posts. They are charged with being more interested in obtaining service than in providing an educational experience at the graduate level of training. Data are lacking to sustain so sweeping an indictment, but evidence continues to accumulate that even extended training in U.S. hospitals fails to correct the serious deficiencies in basic medical preparation characterizing many FMG's who are now entering a lifetime career in our domestic health care system.

The regulation and control of medical practice in the United States, including the licensure of physicians, is a prerogative of the separate states. There are 55 separate medical licensure boards responsible for the administration of medical practice laws within their jurisdictions. Considerable progress has been achieved in recent years in coordinating their activities through the Federation of State Medical Boards of the United States, most notably through the FLEX examination now adopted by all but two states (*22*). Nonetheless the large variations in passing rates on licensure examinations reported by the separate states (using the same examination) are difficult to comprehend. Much also remains to be accomplished in standardizing policies on temporary or limited medical permits and licenses. There is an imminent danger of extending what now appears to be a double standard of graduate medical education to encompass a double standard of medical practice, one standard for USMG's and another standard for graduates of foreign medical schools (*28*).

The American Medical Association, the American Hospital Association, the Association of American Medical Colleges, the Federation of State Medical Boards of the United States, and the Association for Hospital Medical Education have sought since 1957 to coordinate their efforts and to maintain and elevate standards of graduate medical education for FMG's through their joint sponsorship of the Educational Council for Foreign Medical Graduates. This body has successfully conducted its examination program and other activities both domestically and overseas and has gained the cooperation and support of many other national, state, and local organizations and institutions con-

cerned with the problems of migration of physicians from abroad. Yet grave doubts can be raised that policies initiated in the mid-1950's to screen a limited number of FMG's seeking graduate medical training in the United States to prepare themselves better for practice in their home countries are equally appropriate in the mid-1970's, when over 32,000 applicants sit for this examination in a single year. It is significant that in 1972 the number of candidates repeating the examination after one or more previous failures exceeded for the first time the number of candidates sitting for their initial examination (*22*).

More recently these same organizations have sponsored the establishment of a Commission on Foreign Medical Graduates to study and bring back recommendations to resolve the complex problems that have arisen from the increasing inflow of foreign trained medical manpower. The report of this commission, which now is in its fourth year of existence, has not yet been issued. In the interim the commission has assumed an operating function, namely, the administrative supervision for the State Department of hospitals eligible to provide training opportunities for exchange visitor physicians and the processing and monitoring of FMG's in this training status. A merger of the two organizations, the Educational Council and the Commission, to form a new entity, the Educational Commission on Foreign Medical Graduates, has recently been initiated; its responsibilities and goals are in process of definition.

Other national professional organizations, among them the new American Association of Foreign Medical Graduates, the Coordinating Council on Medical Education, and the Liaison Committee on Graduate Medical Education, may justifiably seek to modify existing or to propose new national health manpower policies affecting the role of FMG's in the U.S. health care system. These developments notwithstanding, it is apparent that further coordination of effort and the further reconciliation of somewhat contradictory policies and strategies are indicated at the present time. Such steps are in order if reasonable rationalizations of the domestic physician supply are to be achieved, if the United States is to play an appropriate role in the arena of international health concern, and if the professional training opportunities for FMG's which the United States is uniquely qualified to offer are to be provided. No single national organization or agency has yet emerged to offer the requisite leadership for so desirable a cooperative enterprise.

In his preface to the Report of the Citizens' Commission on Graduate Medical Education, John S. Millis, the commission chairman, noted (*29*):

> For any learned profession there are but two alternatives for establishing standards of practice and education. Responsibility can be assumed by society as a whole, operating through government, or can be assumed by the organized profession through a voluntarily accepted self-discipline. There are no other alternatives, for, if the profession does not take responsibility, society will surely demand that the vacuum be filled and the government assume the responsibility. It is the conviction of the Commission that the profession of medicine should assume the responsibility for its standards of education and should have a mechanism adequate to the full discharge of these responsibilities.

It is self-evident that such principles should be applicable to educational requirements and standards for entrance into practice regardless of the place of birth or the locus of undergraduate medical education of all members of the profession. Government and the medical profession have a joint stake in developing coordinated national policies determining the future flow of physician migration to and from the United States as well as the appropriate role FMG's should play in the delivery of health care to the American public.

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