DOCUMENT RESUME

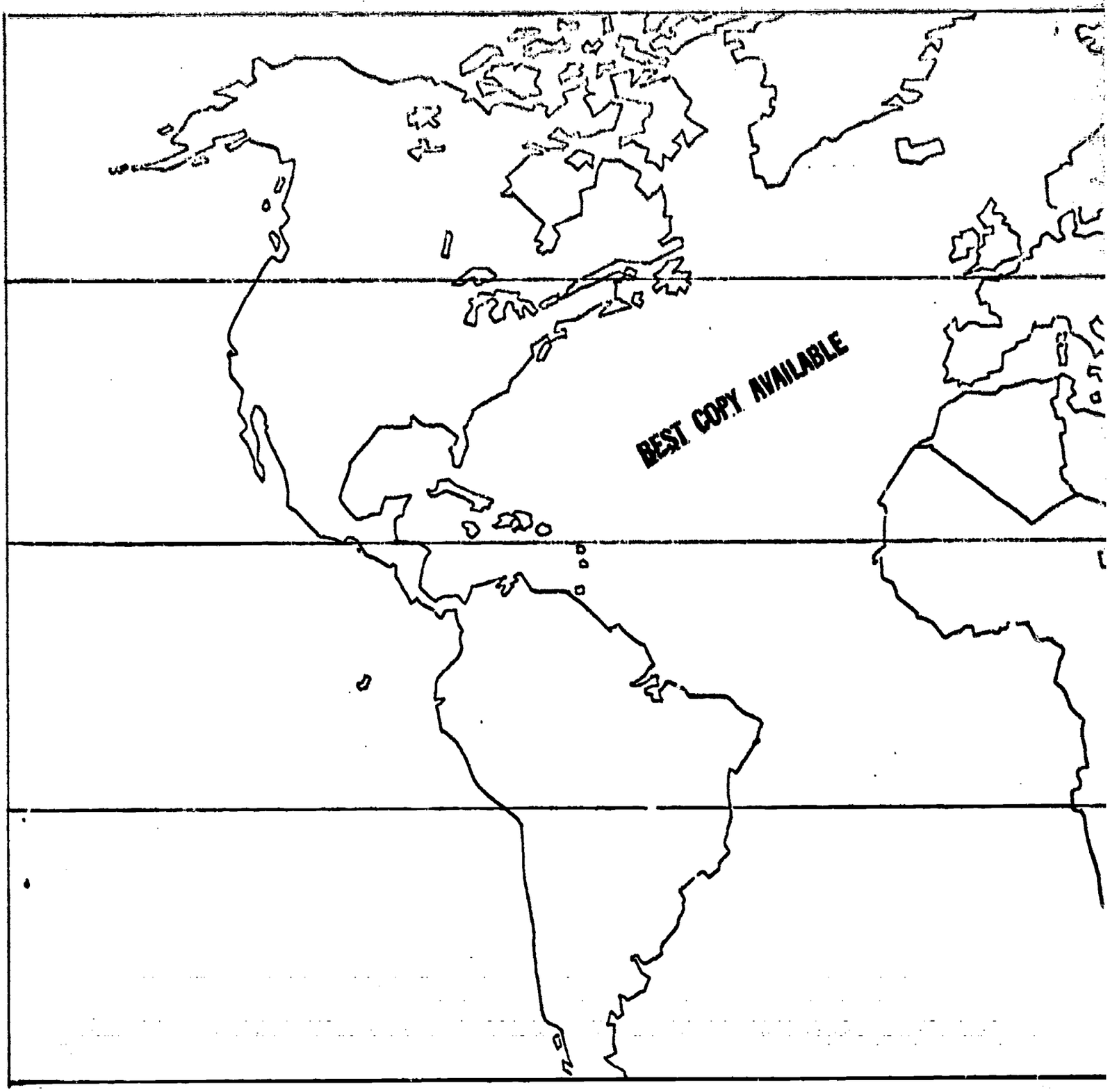
ED 101 930 SE 017 008

AUTHOR	Stevens, Rosemary; Vermeulen, Joan
TITLE	Foreign Trained Physicians and American Medicine.
SPONS AGENCY	National Institutes of Health (DHEW), Bethesda, Md. Bureau of Health Manpower Education.
REPORT NO	DHFW-NIH-73-325
PUB DATE	Jun 72
NOTE	194p.
AVAILABLE FROM	Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (Stock No. 1741-00051, $2.35, domestic postpaid)
EDRS PRICE	MF-$0.76 HC-$9.51 PLUS POSTAGE
DESCRIPTORS	*Foreign Nationals; Labor Economics; Labor Supply; Manpower Needs; *Manpower Utilization; *Medicine; *Physicians; *Research; Science Education; Scientific Manpower

ABSTRACT

The purpose of the study was to bring together available materials on the location, activity, and function of more than 63,000 foreign trained physicians in the United States; to review the political, economic, and organizational factors which have led to the current manpower situation; and to analyze these data in terms of physician manpower, politics, and research. The study offers what is presently known about foreign trained physicians in the United States and the implications of this knowledge for future policy developments and academic research. The major areas discussed are: Foreign Medical Graduates and Medical Manpower in the United States; Qualifications, Testing, and Licensure-The Role of Professional Organizations; International Exchange and Immigration: The Role of Government; and Implications. The monographh also contains extensive statistical tables in support of conclusions and recommendations. (Author/BR)

FOREIGN TRAINED PHYSICIANS AND AMERICAN MEDICINE

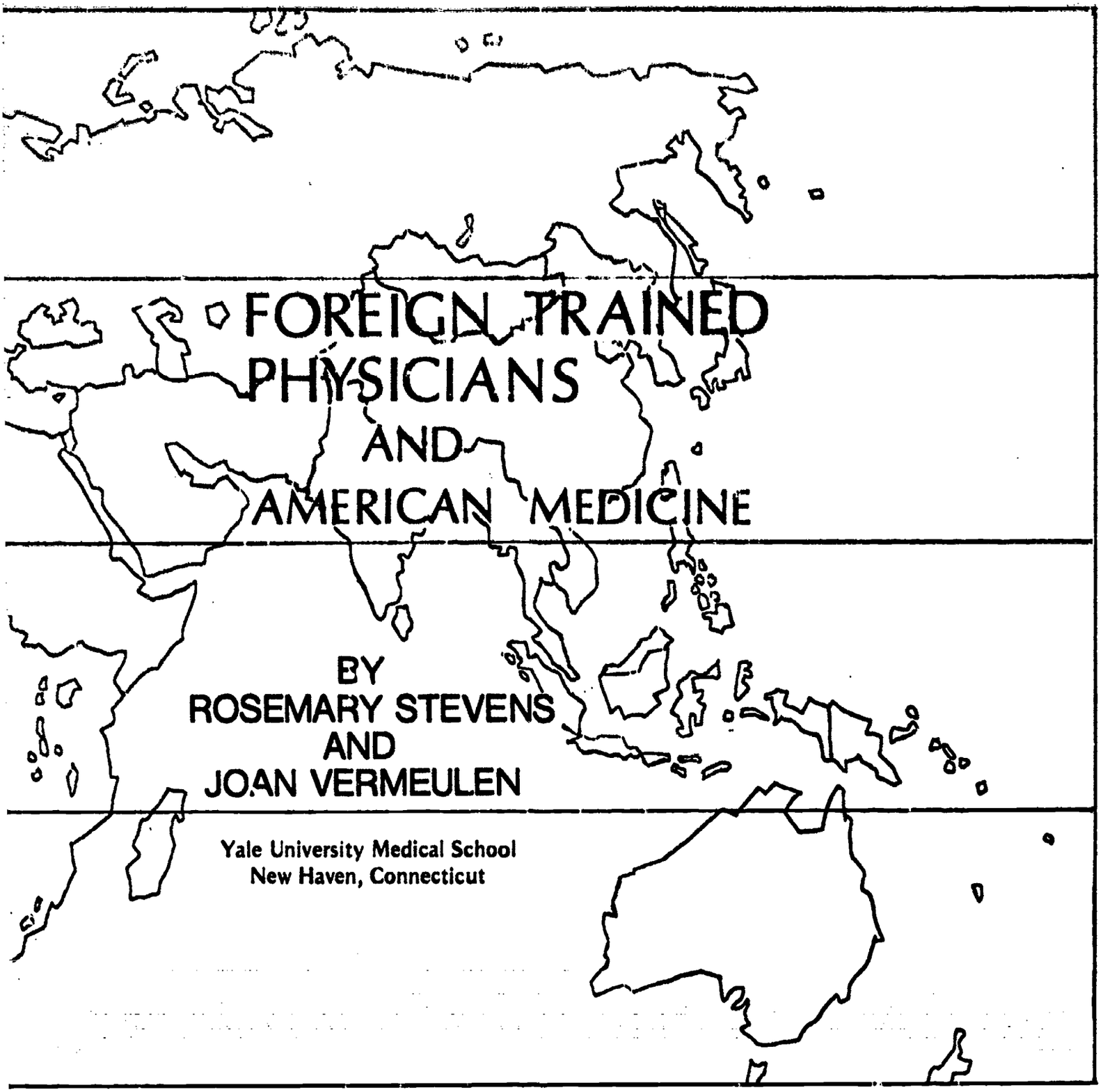


DHEW Publication No. (NIH) 73-325

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE -- NATIONAL INSTITUTES OF HEALTH
Bureau of Health Manpower Education
Division of Manpower Intelligence

JUNE 1972

For Sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402. Price: $2.35, domestic postpaid; $2.00, GPO Bookstore
Stock No. 1741-00051



FOREIGN TRAINED PHYSICIANS AND AMERICAN MEDICINE

BY
ROSEMARY STEVENS
AND
JOAN VERMEULEN

Yale University Medical School
New Haven, Connecticut

The work upon which this publication is based was performed pursuant to Contract No. NIH-70-4127 with the Division of Manpower Intelligence, Bureau of Health Manpower Education, National Institutes of Health, Department of Health, Education, and Welfare. Additional work was undertaken under grants no. HS-00374 and HS 00767 from the National Center for Health Services Research and Development, Health Services and Mental Health Administration.

The opinions, conclusions, and recommendations expressed in this monograph are those of the authors and do not represent the views or policies of the Department of Health, Education, and Welfare. The foreign medical graduate in the United States has become an issue of increasing importance to health care planners and the public in recent years. The study on which this publication is based was undertaken in 1970. This monograph reflects one perspective in the analysis of the data presented; other aspects of the subject need to be examined as well.

Preface

This study was undertaken at the suggestion of what is now the Division of Manpower Intelligence, Bureau of Health Manpower Education, National Institutes of Health. The purpose of the study was to bring together available materials on the location, activity, and function of the more than 63,000 foreign trained physicians in the United States; to review the political, economic, and organizational factors which have led to the current manpower situation; and to analyze these data in terms of physician manpower policies and research. This monograph is the result. It offers a state-of-the-art review of what is presently known about foreign trained physicians in the United States and the implications of this knowledge for future policy developments and academic research.

Such a study would not have been possible without substantial assistance from the organizations most closely concerned with physician immigration, certification, manpower statistics, and research, and from numerous individuals. Special thanks are due to Dr. Halsey Hunt and to Dr. Aims C. McGuinness of the Educational Council for Foreign Medical Graduates; to Dr. William Sodeman, Executive Director, Commission on Foreign Medical Graduates; to James N. Haug, Director, and to Beverly C. Martin, Department of Survey Research of the American Medical Association's Center for Health Service Research and Development; and to Drs. Henry van Zile Hyde and L. Thompson Bowles, Division of International Medical Education of the Association of American Medical Colleges.

Members of the staffs of the United States Immigration and Naturalization Service, the State Department, the Department of Health, Education, and Welfare, the National Science Foundation, and the Institute of International Education were particularly helpful in providing information.

We also wish to thank the MEDLARS staff of the National Library of Medicine in Boston for assistance in compiling the bibliography.

During the process of reviewing research activities, we benefited enormously from materials and advice from other investigators. In particular, we thank Drs. Harold Margulies and Thomas D. Dublin, Department of Health, Education, and Welfare; Oscar Schachter, Director of Research, United Nations Institute for Training and Research (UNITAR); Oscar Gish, now with the Ministry of Health, Tanzania; Roland Knobel of Georgia State University, Irene Butter of the University of Michigan, Kelly West of the University of Oklahoma, and Louis Wolf Goodman of Yale.

Many of these persons generously reviewed and commented on drafts of the manuscript. In addition, valuable comments were made on the manuscript by Robert Stevens of Yale and by Norman Hoover, Henry Mason, and Barbara Kehrer of the American Medical Association.

We express our gratitude and appreciation to all those who assisted us. Needless to say, any errors in the text are our own, as are the various opinions and conclusions.

R. S.

J. V.

Yale University School of Medicine
March 1972

Contents

Preface iii
Contents v
List of Tables vii

INTRODUCTION xi

1. FOREIGN MEDICAL GRADUATES AND MEDICAL MANPOWER IN THE UNITED STATES 1
   - Hospital House Staffs: Graduate Students or Employees? 2
   - Distribution of Foreign Medical Graduates in House Staff Positions 6
   - Distribution of Foreign Medical Graduates by Specialty and Area 10
   - Contribution of Foreign Trained Physicians to Manpower in the United States 14
   - Recent Trends 18
   - Contribution of Other Countries to the Medical Education of Americans 19

2. QUALIFICATIONS, TESTING, AND LICENSURE THE ROLE OF PROFESSIONAL ORGANIZATIONS 25
   - Development of the Educational Council for Foreign Medical Graduates (ECFMG) 26
   - Function of the ECFMG 31
   - The ECFMG, National Board, and Licensing 35
   - The Question of Competence 41

3. INTERNATIONAL EXCHANGE AND IMMIGRATION: THE ROLE OF GOVERNMENT . . 49
   - Formalizing International Exchange 50
   - Educational Exchange: Reappraisal 57
   - Changing Policies Toward Immigration 64
   - Recent Trends 69

4. IMPLICATIONS 75
Areas for Action 76
Needs for Information and Research 84
Pressures for Change 89

5. APPENDIX: STATISTICAL TABLES . . . 93
A. Immigration and Visa Status 93
B. Foreign Medical Graduates in Graduate Educational Positions in the United States . . 109
C. Examining and Licensing of Foreign Medical Graduates in the United States 125
D. Distribution of Foreign Medical Graduates in the United States by Major Professional Activity and Location 141
E. Hospital Staffing and Other Manpower Factors in the United States Relating to the Employment of Foreign Medical Graduates 163

BIBLIOGRAPHY 171

List of Tables

APPENDIX TABLES A – IMMIGRATION STATUS

Table A1 – Physicians and Surgeons Admitted to the United States as Immigrants, Years Ended June 30, 1901-1971.

Table A2 – Comparison of Foreign Physicians Admitted to the United States with Numbers of U.S. Medical Graduates, 1962-1971.

Table A3 – Temporary Workers Admitted to the United States under Section 101 (a) (15) (4) and Section 101 (a) (15) (J) of the Immigration and Nationality Act: Physicians and Surgeons, Fiscal Years 1967-1971.

Table A4 – Foreign Physicians and Surgeons Admitted to the United States, Fiscal Years 1953-1970.

Table A5 – Physicians and Surgeons Admitted to the United States as Immigrants by Country or Region of Last Permanent Residence, Fiscal Years 1953-1971.

Table A6 – Percent Distribution of Physicians and Surgeons Admitted to the United States as Immigrants by Country or Region of Last Permanent Residence, 1957, 1965, and 1971.

Table A7 – Immigrants and Exchange Visitors, All Occupations and Physicians, by Major Region of Origin, Fiscal Year 1971.

Table A8 – Migration of Physicians from Selected Countries, Fiscal Year 1971.

Table A9 – Foreign Countries Contributing Greatest Number of Graduates to U.S. Graduate Programs, December 31, 1970.

Table A10 – Foreign Medical Graduates in the United States by Geographical Region of Graduation, December 31, 1970.

Table A11 – International Exchange in Medical Education, 1954-55 through 1969-70.

Table A12 – Foreign Medical Graduates in the United States By Country of Graduation and Country of Birth, December 31, 1970.

APPENDIX TABLES B – FOREIGN MEDICAL GRADUATES IN GRADUATE EDUCATIONAL POSITIONS IN THE UNITED STATES

Table B1 – Status of Internship and Residency Programs in the United States.

Table B2 – Foreign Medical Graduates in Graduate Training Programs in the United States, 1950-51 to 1970-71.

Table B3 – Percentage of Foreign Graduates in Filled Hospital Residency Positions by Specialty, 1963-1970.

Table B4 – Number of First-Year Residencies, by Specialty, in Affiliated and Nonaffiliated Hospitals, September 1968.

Table B5 (i) – Foreign Medical Graduates Serving as House Staff in U.S. Hospitals, by Medical School Affiliation and Size of Hospital: 1960.

Table B5 (ii) – Foreign Medical Graduates Serving as House Staff in U.S. Hospitals, by Medical School Affiliation and Size of Hospital: 1970.

Table B6 -- Foreign Residents in Affiliated and Nonaffiliated Hospitals, 1963-1970.

Table B7 – United States and Canadian Medical Graduates as a Proportion of Internship and Residency Positions Offered, 1950-51 to 1970-71.

Table B8 – Foreign Medical Graduates as Percentage of House Staffs in Individual Hospitals, 1967.

Table B9 – Participation of Foreign Medical Graduates in National Intern and Resident Matching Program, 1955-1971.

Table B10 – Number of Residencies, by Census Region and State, September 1970.

Table B11 – Women in Graduate Medical Education by Country of Medical Education, September 1970.

Table B12 – Negro U.S. Citizens Serving in Internship and Residency Programs by Country of Graduation, September 1970.

APPENDIX TABLES C – EXAMINING AND LICENSING OF FOREIGN MEDICAL GRADUATES IN THE UNITED STATES

Table C1 – ECFMG Examination Centers.

Table C2 – Examinations Given by the Educational Council for Foreign Medical Graduates, 1958-1970.

Table C3 – Number of Foreign Medical Graduates Taking the ECFMG Examinations, 1958-1970, by Place of Examination.

Table C4 – Performance of Foreign Medical Graduates on ECFMG Examinations, 1958-1970.

Table C5 – Percentage Distribution of Scores, ECFMG Examination, February 1969.

Table C6 – ECFMG Standard Certificates Issued, 1970 – Distribution of Recipients by State and Country and Distribution of Recipients by Country of Medical School and Citizenship.
Table C7 – Source of Candidates Examined for Licensure in the United States, 1970.
Table C8 – Physicians Examined for U.S. Licenses on the Basis of Credentials Obtained in Countries Other Than the United States and Canada, 1935-1970.
Table C9 – Status of Requirements for Medical Licensure for Physicians Trained in Foreign Countries Other Than Canada.
Table C10 – Licensing of Foreign Medical Graduates by State, 1970.
Table C11 – Number and Percentage of New Additions to the U.S. Medical Profession Represented by Foreign Medical Graduates, 1950-1970.
Table C12 – Initial U.S. Licenses Issued to Graduates of Foreign Medical Schools, 1950-1970.

APPENDIX TABLES D – DISTRIBUTION OF FOREIGN MEDICAL GRADUATES IN THE UNITED STATES BY MAJOR PROFESSIONAL ACTIVITY AND LOCATION

Table D1 (i) – Number of Physicians Located in the United States, its Territories, or on Temporary Foreign Assignment, Classified According to Whether They Are Graduates of U.S. Medical Schools, Mid-1959.
Table D1 (ii) – Number of Physicians Located in the United States, its Territories, or on Temporary Foreign Assignment, Classified According to Whether They Are Graduates of U.S. Medical Schools, December 1967.
Table D1 (iii) – Physicians in the United States by State of Practice and Country of Graduation, December 31, 1970.
Table D2 – Physicians in the United States by Age and Country of Graduation, December 31, 1970.
Table D3 – Foreign Medical Graduates and U.S. and Canadian Medical Graduates in the United States by Major Professional Activity, December 31, 1970.
Table D4 – Foreign Medical Graduates in Comparison with All Physicians in the United States by Major Professional Activity, December 31, 1970.
Table D5 – Foreign Medical Graduates in Comparison with All Physicians in the United States by Specialty, December 31, 1970.
Table D6 – Foreign Medical Graduates in Anesthesiology, Radiology, Pathology, Physical Medicine, and Psychiatry in Comparison with All Physicians in These Specialties, December 31, 1970.

Table D7 – Foreign Medical Graduates in the United States by Country of Graduation and Federal and Non-Federal Employment, December 31, 1970.
Table D8 – Graduates of Foreign Medical Schools as Percentage of All Physicians in Selected SMSA's, December 31, 1967.
Table D9 – Graduates of Foreign Medical Schools in Selected Standard Metropolitan Statistical Areas (SMSA's), 1963, 1967, 1970.
Table D10 – Foreign Medical Graduates in the United States by Activity and Year of Graduation, December 31, 1970.
Table D11 – Foreign Medical Graduates in the United States by Country of Graduation and Selected Age Groups, December 31, 1970.
Table D12 – Distribution of Physicians by Country and by Sex, 1963, 1967, 1970.

APPENDIX TABLES E – HOSPITAL STAFFING AND OTHER MANPOWER FACTORS IN THE UNITED STATES RELATING TO THE EMPLOYMENT OF FOREIGN MEDICAL GRADUATES.

Table E1 – Applications to U.S. Medical Schools, 1947-1970.
Table E2 – Number of Approved Internships Offered in the United States and its Territories and Possessions in Relation to Graduates of U.S. Medical Schools, Selected Years, 1939-1970.
Table E3 – Graduates of Foreign Medical Schools in the United States, by Year of Graduation and Hospital Position, December 1970.
Table E4 – Number of Physicians Employed and Additional Positions Needed to Provide Optimum Patient Care in Hospitals in the United States, 1969.
Table E5 – Estimated Number of Americans Enrolled in 16 Medical Schools in Mexico and Europe, October 1969.
Table E6 – Number of Students Transferring from Foreign to U.S. Medical Schools, 1960-1970, and Students Transferring from Foreign to U.S. Medical Schools by Year of Class.

Introduction

One of every six physicians now practicing in the United States is a graduate of a medical school outside the United States and Canada. If Canadian graduates are also included, the proportion of foreign medical graduates in the United States rises to almost one-fifth. Altogether there are more than 63,000 foreign trained physicians in the United States.[1]

Approximately 25,000 of these physicians received their medical education in Europe. Another 21,000 are drawn from countries in Asia, notably from the Philippines, India, and Korea. There are 10,000 physicians from medical schools in Latin America, 6,000 from Canada, and 1,000 from countries in Africa.

Many physicians come to this country for graduate medical education. There is now one foreign trained physician to every two graduates of American schools serving on hospital house staffs in approved graduate educational positions.[2] But the line between graduate medical education and hospital staffing may be exceedingly thin. To a greater or lesser degree all interns and residents engage in direct patient care, with the amount of supervision they receive varying from hospital to hospital. Furthermore, as members of house staffs they are at the point of access to permanent practice in the United States. Indicative of this is the fact that over one-half of the candidates for state licensing examinations are now foreign trained physicians.[3]

As this study will show, the majority of foreign medical graduates in internship and residency positions in this country — whatever their initial intentions — elect to remain in the United States. Thus, this country is the recipient of substantial "reverse foreign aid." The United States is reaping the rewards of investments made by other countries in the education of physicians, and those countries are suffering a long-term loss of physician services.

1. Appendix Table A10. Much of the basic statistical information about foreign trained physicians comes from the American Medical Association, which tends — because of equivalent standards of medical education — to group Canadian medical graduates with graduates of U.S. medical schools, retaining the term "foreign medical graduate" to apply to everyone else. The three groups (United States, Canadian, and other foreign) are carefully distinguished in the Appendix Tables.
2. Appendix Table B2.
3. Appendix Table C10.

This situation did not arise overnight. For many reasons -- educational, economic, and social -- foreign physicians have long been attracted to the United States. The rapidly increasing number of foreign trained physicians in the United States in the last few years, however, has made it impossible to ignore their increasing contribution to the American health care system. Excluding Canadians, the number of foreign medical graduates in this country rose from 31,000 in 1963 to 57,000 in 1970 -- a net gain of 26,000 physicians in a seven year period.[4]

The influx of foreign trained physicians is primarily a market response to a shortage of physicians in the United States. While there is a continuing demand for additional physicians, most notably for hospital house staffs, economics alone would suggest a continuing flow of doctors, particularly from countries with relatively low income levels for professionals and limited openings for medical practice. Economic factors undoubtedly provide other incentives which draw individual physicians to the United States: the opportunities to work with sophisticated equipment, for example, and the virtually unlimited opportunities to practice medicine in major cities.

The nature of the "pull" factors deserves special scrutiny, however. Has the United States been training too few physicians to meet current needs? Current efforts toward a rapid increase in the number of medical students would suggest that it has. Yet in comparative terms the United States is already one of the world's richest countries in terms of its production and supply of physicians. It is perhaps more accurate to say that the American health system encourages a relatively prodigal use of physicians, compared with the more tightly organized health systems elsewhere, and that this, in turn, reflects the absence of goals and policies for physician manpower distribution in America. If so, domestic and foreign policies cannot be considered separately.

As will be seen, the United States Government discriminates strongly in favor of admitting physicians in its otherwise highly restrictive immigration laws. This process raises questions from both the domestic and the foreign points of view. By effectively reaching outside this country for additional physicians, the United States, while temporarily alleviating its own situation, makes little progress toward a long range domestic strategy for an adequate supply of health care personnel. In the meantime, the influx of foreign medical graduates enables American trained physicians to continue to enjoy the luxury of unrestricted choice of type and location of practice. One of the side-effects of this situation is that the entry of foreign graduates into the picture appears to heighten rather than reduce pre-existing inequalities in the distribution of physicians between urban and rural areas and by state.[5]

As well as postponing serious planning and preserving the *laissez-faire* aspects of American medical care, the drain of foreign medical graduates to this country has equally important

4. Appendix Table D9.

5. See the study by Irene Butter and Richard Schaffner, "Foreign Medical Graduates and Equal Access to Medical Care," *Medical Care*, 9 (1971), 136-43.

international implications. While the United States dominated world politics and "American omnicompetence" was rarely challenged, neither the developed nor the underdeveloped countries, who saw their medical graduates leave for the United States in the certain knowledge that many would never return, felt able to register serious complaints. With the growth of the "low profile," coupled with the pricking of the myth of omnicompetence, however, foreign governments have become less likely to accept in silence the loss of some of their best medical talent; and the Department of State has already had to become more sensitive to their complaints.

Even in terms of domestic policies, the arguments advanced in favor of the present arrangements are frequently unsatisfactory. Hospitals continually claim to need more house staff and insist that the number of internships and residencies cannot be reduced without a significant decline in the quality of patient care. These positions are nominally established for educational rather than service needs. In reality, however, hospitals have become dependent on their house staffs for the provision of routine medical services, both for inpatients and for their expanding emergency rooms and clinics. As a result, foreign physicians, together with their American counterparts, have been eagerly sought, reflecting an apparent staffing shortage in the hospitals. Without the benefit of foreign graduates, what would have happened? It is unlikely that hospitals would have closed; other staffing solutions would have been found. There would probably have been an earlier interest in paramedical personnel, particularly the currently developing vocations of the nurse-practitioner and the physician assistant, thus enabling doctors to utilize their specialized training more efficiently. The residency system might have been radically revised. These possibilities remain. But the presence of a short term solution to staffing problems effectively postpones a serious redefinition of these roles.

The question of relative competence also demands careful appraisal. While foreign medical graduates are actively recruited by hospitals for training and staff positions, the notion persists that, as a group, they are somehow second-rate physicians compared with American graduates. The tendency to portray foreign trained physicians as a homogeneous group (which they are not) does not help the situation. To take an obvious example, those physicians who have been trained in English have, at least in the beginning, a clear advantage over their colleagues whose training has been in another language. The same is true for those physicians coming from cultures similar to that of the United States. Some recent studies have indicated that the performance level of foreign medical graduates, even when taken as a group, is related to specialty and to type of hospital, rather than to national origin.[6] Yet the varying quality of education in different schools around the world is a major headache for those

6. See studies by Roland Knobel and by Jacob Halberstam, Michael Dacso, Howard Rusk, et. al. noted in the bibliography.

7. American Medical Association, *Digest of Official Actions 1846-1958*, April (1926), 30.
8. Appendix Table C9.
9. American Medical Association, *Digest of Official Actions*, June (1938), 57, 61.

trying to assess the potential competence of those wishing to enter this country.

The conflicting purposes and policies surrounding physician migration stem from a series of historical events. Certainly the presence of foreign medical graduates in the United States is hardly a recent phenomenon. Even before World War I, when the United States was far behind Germany as a center for medical techniques, there was a steady flow of physician immigrants. From the 1920's, as Americans achieved eminence in scientific medical research, a second wave of physicians seeking techniques and skills as yet unavailable in their own countries began to arrive, generally with the intention of returning home at the completion of their training. These developments had the blessing of the medical profession. As early as 1926, the Council on Medical Education and Hospitals of the American Medical Association recorded its opposition to the establishment of any undue restrictions on foreign physicians seeking graduate medical education in the United States.[7]

Such benevolent sentiments were relatively easy to make in the prosperous 1920's, a time of sharp cut-backs in the future supply of American physicians as a result of the closing of proprietary medical schools following the Flexner report of 1910 – the basis of modern medical education. This generosity was harder to express amidst the general deprivations of the Depression. In a situation of declining professional incomes and even financial hardship in private practice during the 1930's, however, compared with the relative security of hospital residency posts, the influx of foreigners, even for training, was seen as a threat.

During this period, a number of state medical associations prevailed on their state licensing boards to tighten the requirements for out-of-state practitioners. The 1930's saw the development of basic science examinations and citizenship requirements as prerequisites for licensure, characteristics which have not yet vanished. Eight state boards still require physicians to be U.S. citizens for licensure, and the majority of the other boards require at least a declaration of intent to become a citizen.[8] This generally restrictive movement against foreigners, or at least against those who wished to move directly into practice, was reflected in a resolution by the AMA House of Delegates in 1938 that United States citizenship be required of all foreign physicians seeking licensure.[9]

World War II began in Europe with the response of American hospitals and the medical profession to the arrival of foreign physicians still undecided, fragmented, and conflicting. Licensing requirements designed to curb the influx of new physicians were maintained by state medical examining boards. On the other hand, the development of well-equipped hospital medical centers in the 1930's, with their array of specialized departments and clinics, and the scientific excellence of the university medical

schools testified to the potential role of the United States in providing advanced training for the world's physicians. If foreign physicians came to the United States for training, and then went home again, of course, no conflict arose between these two positions. But there was already a dichotomy between the rule for professional practice for foreign trained and American trained physicians. A foreign trained physician could be accepted for advanced training in a specialty at a major American institution, learning side by side with his American peers, but then fail to meet certain requirements for licensure that bore no relationship to professional ability.

With the 1950's and the recognition of a doctor shortage, attitudes toward foreign trained physicians began to change. Hospitals, experiencing staffing vacancies as a result of the Korean War and the physician draft, began to de-emphasize the issue of competence. In a total reversal of the philosophy underlying the Flexner report, it was argued that even a poorly trained doctor was still better than no doctor at all. Indicative of such thinking was the passage of the Brydges Act in New York in 1953. This enabled the hospitals to appoint foreign house staff by exempting them from licensing requirements. Seen as a source of readily available house staff, foreign medical graduates were enthusiastically recruited and even encouraged to stay.

This contribution of foreign trained physicians to the United States has always been immense. At least one American specialty, psychiatry, owes much of its development to those who immigrated before World War II. In terms of individual contributions to medical progress in this country, an enumeration of foreign educated physicians would include prominent teachers and researchers in most, if not all, American universities. By the 1960's, however, there was another stream of foreign medical graduates, brought in to staff hospitals rather than to develop the frontiers of medicine, either in the United States or in their home countries.

Since World War II, the time period with which this study is concerned, an important mechanism for bringing foreign physicians to this country has been the educational exchange program. The program was originally intended primarily to facilitate international transmission of knowledge. With the intervention of the Cold War in the 1950's, however, its purposes were enlarged to foster a favorable image of the United States and to counteract unfavorable propaganda from abroad. The assumption was, of course, that foreign trainees, among them physicians, would return home. Once again the training of foreign physicians was to become secondary to national and local interests.

In this respect the government's attitudes parallel those of the hospitals. At present, with the new immigration laws and current Congressional attitudes both encouraging an influx of foreign trained physicians, one can expect more physicians to

come intending to practice. For those who continue to come as interns and residents, the new laws (discussed in Chapter III) facilitate their remaining here after training.

As for those foreign medical graduates who intend to return home to practice, the question of the relevance of their American training remains. In many countries of the world the type of medical skills most urgently required are those of the general practitioner and the public health professional. America - with its highly specialized physician training, and a health care system which emphasizes sophisticated forms of treatment rather than disease prevention - is an unlikely focus for these types of training. It is noteworthy, too, that specialties with high concentrations of foreign trained physicians in residency positions, notably anesthesiology, pathology, and physical medicine, tend to be fields with limited appeal to American graduates. Indeed, the possibility exists that at the conclusion of their experience many foreign physicians will no longer, either professionally or culturally, be able to fit into their own countries.

In short, many elements combine to form a web of conflicting policies and objectives in which the present situation of foreign medical graduates must be appraised. As a result of immigration and educational exchange policies,foreign physicians have come to the United States in numbers that have benefited this country without much regard to the effect on the remainder of the world. They have been welcomed, in particular, to hospital staffing positions. Yet, in some respects, they are still treated as second-class citizens. The United States is no worse than many other advanced industrial nations in utilizing talent from other countries, particularly Third World countries, to fill professional manpower shortages. The fact remains that for over 20 years the United States has provided advanced medical training for tens of thousands of foreign physicians without ever developing a clear-cut policy as to what its responsibilities are with regard to the sharing of its advanced medical knowledge and technology. Under the guise of being a donor, it has become a donee nation, counselling other countries to look after themselves – advice which, while comporting with the American tradition of maximum free choice for the individual, is sometimes regarded as hypocritical by other nations.

This study examines the various interlocking strands of activity which have created the "foreign medical graduate situation." Of equal importance, it offers basic information from which – we hope – responsible policies will be developed.

FOREIGN MEDICAL GRADUATES AND MEDICAL MANPOWER IN THE UNITED STATES

1

It is essentially as hospital employees that foreign medical graduates enter the United States. At the end of 1970, 28,000 of the 63,000 physicians from foreign schools were working full-time in American hospitals as interns, residents, or full-time staff. While constituting less than one-fifth of all the physicians in this country, they provide about one-third of all physicians in hospital-based practice (Appendix Tables D3, D4). In anesthesiology, nearly one-half of the 2,700 full-time hospital physicians, including interns and residents, are graduates of foreign medical schools (Appendix Table D6).

The placement of foreign medical graduates on hospital staffs raises a number of implications for American medicine, in terms both of graduate education and of future physician supply. Most physicians entering the United States do so early in their careers. Almost one-half (27,033) of all foreign graduates in this country (excluding Canada) are under the age of 40; the majority (34,744) graduated from medical school within the last 15 years. Foreign trained physicians under age 40 include 1,000 graduates from Thailand, 1,700 from South Korea, 3,500 from schools in India, and 5,600 from the Philippines (Appendix Table D11).

Some of these physicians undoubtedly come with the intention of remaining; for these, a hospital post offers the vehicle for assimilation – socialization – into the American medical profession. Some intend to return home. Their needs fall more nearly under the rubric of international education. But many, if not most, may have no clear-cut career intentions, or may change these (generally to remaining in the United States) as they move through the 4 or 5 years of graduate education. The impact of the internship and residency (and to a lesser degree other hospital positions) on the individual is thus a critical factor in the process of physician migration.

The numerical aspects of graduate medical education also deserve to be stressed. Of the total of 28,000 foreign trained physicians on hospital staffs, 17,000 are interns and residents. It is from this large and promising pool that future American physicians can be drawn.

Any review of the role of the foreign trained physician in American medicine must regard the internship and residency as the hinge on which other questions swing. This chapter thus begins by reviewing the status of graduate medical education in the United States, and the type and distribution of positions held by foreign trained physicians. The role of foreign trained physicians in other – presumably more permanent – positions is then explored. Finally, the reverse side of the coin, we look at American citizens who become foreign medical graduates by virtue of attending a medical school abroad and return to practice in the United States.

Hospital House Staffs: Graduate Students or Employees?

Graduate education of physicians, in the United States as elsewhere, has long been the responsibility of the hospitals, with standards set and overseen by national professional groups. The internship was claimed half-heartedly from time to time as the fifth year of medical school, although by the 1950's most medical schools (though not state licensing boards) had dropped it as part of the requirement for the MD degree. The specialty certifying boards put their stamp on the residency program. Even in 1960, only 38 percent of the internships and 54 percent of the residencies were in hospitals affiliated with university medical schools. Moreover, even in affiliated hospitals, the organization of graduate medical education as a journeyman apprenticeship sharply distinguished the interns and residents from their juniors who were full-time university students working toward the MD degree.[1] It was into this milieu, of learning through doing, that the foreign physicians were dropped. Because the nature (and value) of residency training is the provision of services under supervision, foreign trained physicians become *de facto* junior members of the American medical profession for the duration of their graduate education.

Internships and residencies are now offered in 1,400 hospitals which contain among them almost one-half of the hospital beds in the country. These hospitals, together with their attending medical staffs, have a vested interest in retaining the scattered system of graduate apprenticeship which has become the basis for one-half of the physician's professional education. Thus the medical profession itself – or at least that substantial part of it which relies on house staffs to give invaluable professional service to their own hospitalized patients – has little incentive to suggest radical change. Rather, there has been every incentive to encourage the employment of foreign trained physicians.

1. This section draws in part on Rosemary Stevens, *American Medicine and the Public Interest*, (New Haven, Yale University Press, 1971), ch. 17.

In the crucial expansion period of internships and residencies after World War II, the Council on Medical Education of the American Medical Association imposed controls neither over the total number of house staff positions which were being offered by hospitals nor over the number of programs or teaching hospitals approved for such training. Between 1940 and 1960, at a time when entry into medical school was being tightly controlled, the number of physicians in internship and residency training programs trebled from less than 12,000 to nearly 38,000. By 1960, one out of every seven physicians was an intern or resident. Since then the rate of increase has slowed, but the aggregate number has nonetheless continued to grow until the number of house staff now exceeds 50,000 (See Appendix Table B1).

The Council viewed (and still views) its role as one of accreditation of programs which meet rather minimal educational criteria, rather than as an educational planning agency. Because of the generally high standards of American hospitals, coupled with the desire of hospital boards for residency coverage and the interest of physicians in teaching, large numbers of training posts are potentially available. There is no educational rationing process linking the supply of training posts to the supply of graduates from American medical schools. As a result, in sharp contrast to the competitive entry to American medical schools, there are far more approved internship and residency positions offered each year than there are physicians available to fill them. In 1940, more than 90 percent of the internships offered were filled; in 1950 the proportion was less than 70 percent; it is currently 75 percent.[2] Competition among hospitals has become intense, with some institutions inventing ingenious methods of recruitment and inducement, others in despair of recruiting any house staff, and many relying on foreign trained physicians. So intense has the competition become, indeed, that some degree of control over entry into graduate medical education has become essential. The questions are how much control, for what purposes, and by whom control should be exerted.

These questions have not been answered; but the history of various attempts to answer them is instructive. One resolution, referred to the AMA Council on Medical Education in 1948, would have set up a rationing system for house staff on the basis of a hospital's annual patient admissions. In theory, this scheme would have given small hospitals a better chance of attracting interns and residents against the competition of large, more prestigious institutions. But this suggestion could hardly appeal to those interested in developing the internship as an integral part of the system of medical education, irrespective of the service needs of hospitals.

Instead, as a measure to regulate competition among hospitals and to introduce some order into the selection process

2. Figures for internships and residencies are given in: "Annual Report on Graduate Medical Education in the United States," *Journal of the American Medical Association* and the AMA's *Directory of Approved Internships and Residencies.*

for prospective interns, the National Intern Matching Program was set up in 1951. Under the guidance of the Council on Medical Education, the Association of American Medical Colleges, and various hospital organizations, the Program developed a procedure and a set of rules by which hospitals and prospective interns could make their selection of, respectively, house staff and posts, including an agreed time for hospitals to offer their appointments. Since 1968, the matching plan has also been available for residents.

The matching plan brought a welcome degree of organization to a chaotic situation, protecting both hospitals and house staffs -- at least, those interns and residents who are graduates of American schools. Medical students could henceforth become interns through a process of orderly change. The process did not, however, affect the nature of the internship itself, poised uneasily between undergraduate education and specialist residencies, part an educational experience, part a job.

Nor did it provide the same orderly process of change for the growing throng of foreign medical graduates. Since there is no compulsion on hospitals (or for that matter on prospective house staffs) to use the matching plan, one primary result was a more efficient system for distributing American graduates to the most prestigious hospitals. Few benefits have accrued to most foreign physicians. The time lag alone required for the latter to enter the matching plan has proved a barrier. In any event, few foreign trained physicians have made use of the matching program as a guide for entering the American hospital system. Only 353 participated in the program in 1971 (Appendix Table B9) out of at least 5,000 new foreign trained physicians who entered house staff training that year. Whether this is due to the degree of foresight needed for foreign physicians to enter the program, or to ignorance, or to a feeling that it is not particularly useful, or for whatever other reasons, is not clear.

Altogether, the matching program matches over 8,000 interns a year; these run about 3:1 in favor of university-affiliated hospitals.[3] Interns in these hospitals are also, one assumes, more likely than those in nonaffiliated hospitals to continue in residency posts in the university setting. Undoubtedly the operation of the matching program is one factor in the differential placement of American and foreign trained physicians in affiliated and nonaffiliated institutions. Foreign medical graduates represented only 27 percent of house staff in university-affiliated hospitals in 1970, as against 61 percent of the house staff of nonaffiliated hospitals (Appendix Table B5 ii).

The difference in goals between community hospitals and university educators has dominated discussions of house staff since the 1950's, the former looking for the service of house staff, the prestige of educational accreditation, and perhaps an enhancement in the quality of service given in a teaching environment; the latter viewing interns and residents more in the

3. See "Special Studies in Graduate Medical Education," *Directory of Approved Internships and Residencies*, 1969-70, 20-21. . .

light of graduate students who might more properly be concentrated in a relatively small number of institutions, and as a welcome source of teachers for the growing numbers of medical students. This dichotomy of views has been reflected over the years in the differing pronouncements emanating from the AMA House of Delegates and from its Council on Medical Education. One example of this was a suggestion by the Council on Medical Education in 1951 that there should be an overall reduction in the number of internships in approved hospitals. At that time, more than 2,000 approved internships were lying vacant; the reduction would thus have recognized an established fact.

It was suggested that hospitals approved for intern training in 1952-53 should be cut back to 80 percent of the number offered in 1950; and in those approved for both internships and residencies the number was to be reduced to 70 percent.[4] But this plan, not surprisingly, held little appeal to medical staffs in approved hospitals, and no action was taken. For hospitals which had been able to fill their internships, the suggestion threatened an unwelcome staffing cut-back. For those unable to fill their places, it cut off the possibility of their ever being able to do so. And, more generally, a reduction in available places was seen as indicating that there was less of a "shortage" of house staff than the hospitals themselves were experiencing.

As the number of foreign physicians began to rise rapidly in the 1950's, the special manpower needs of hospitals created a situation whereby a supposed sufficiency of doctors in practice was matched by a shortage of graduate medical students. This paradoxical situation, however, has little to do with the future production of private physicians; the shortage is with house staff *per se*, not necessarily with trainees in different specialties. In 1970-71, over 15,000 internships were offered by American hospitals; only 8,213 were filled by American or Canadian graduates; the respective figures for residencies were 46,000 and 26,000. At present, then, little more than one-half of the internships and residencies being offered in American hospitals are filled by graduates of American or Canadian medical schools (Appendix Table B7).

The fact that 1,400 independent hospitals determine the number of house staff positions to be offered needs to be stressed, for their uncoordinated decisions have led directly to the present number of foreign medical graduates in the United States, a move facilitated (but not caused) by relatively permissive visa arrangements and requirements for professional certification. Whatever the individual motivations urging physicians to come to the United States, without job offers most would probably have been unable to do so. According to figures collected by the American Hospital Association, in collaboration with government agencies, American hospitals are currently short 10,000 physicians, the addition needed to provide optimal patient care (Appendix Table E4). Presumably, then, their

4. For hospitals approved after 1950, a formula was to be developed. "Establishment of a Quota Basis for the Appointment of Interns," *Journal of the American Medical Association 146* (1951), 365- 66. And see *AMA Digest of Official Actions*, 421.

demand for more foreign physicians will continue.

Distribution of Foreign Medical Graduates in House Staff Positions

Almost 20,000 foreign trained physicians were in graduate educational positions in American hospitals and universities in 1970-71. Of these, approximately 3,000 were interns, 13,000 were residents, and another 3,000 were in other graduate training positions (Appendix Table B2). The latter category includes posts classified as research or teaching fellowships, clinical traineeships, and other types of work leading toward specialization and possible specialty board certification.

This "other" category grew from a mere 1,024 foreign medical graduates in 1962-63 to 4,046 in 1968-69; it is now down to 3,331 foreign trained physicians, but these represent over 40 percent of all trainees in the category. The proportions are of particular note in general practice, where 69 percent of the 156 trainees were foreign graduates in 1970; in obstetrics and gynecology (60 percent of 313); anesthesiology (56 percent of 207); radiology (56 percent of 284); surgery (54 percent of 872); and pathology (53 percent of 593). There is a suspicion in these figures that at least some of the foreign medical graduate "trainees" are classified as such for reasons relating to program accreditation, e.g., a hospital may employ a "fellow" in anesthesiology even if it does not have an approved residency training program. Some of the physicians in this category may also be working in nonpatient care activities which do not require physicians to have the ECFMG certificate.

The great rise of foreign physicians in internship and residency programs in the last 20 years has been noted. In 1950-51, foreign graduates represented only 10 percent of the interns and 9 percent of the residents in American hospitals. The figures for 1970-71 were 29 percent and 33 percent, respectively (Appendix Table B2). Throughout the 1950's there was a marked tendency for foreign house staff to receive appointments in hospitals not affiliated with medical schools. Indeed, by 1960, there were nearly twice as many foreign physicians in nonaffiliated as in affiliated hospitals (Appendix Table B5 i).

The majority of internships and residencies now being offered are in hospitals affiliated with university medical schools. In large part, these are the same hospitals as before, but they have entered into affiliation agreements with medical schools for the purpose of graduate education. One great impetus for so doing has been the expectation that more applicants will be available for house staff appointments in the affiliated hospital, and that an increasing number of Americans may apply. Of the total 15,000 internship positions offered in 1970-71, only 5,226 (36 percent) were in nonaffiliated hospitals; and of the 46,000 residencies, only 10,447 (23 percent).[5] Interestingly, the tide may be about to turn, with an increasing number of American

5. "Graduate Medical Education in the United States," *Directory of Approved Internships and Residencies*, 1969-70, 5, 12.

medical students seeking out community hospitals -- to get away from the medical "establishment," as well as in search of a wider and fuller period of training. Foreign trained physicians still, however, play a much more substantial role than American graduates in the nonaffiliated institutions.

One illustration will suffice to emphasize these differential distributions, which are being examined by Roland Knobel of Georgia State University. In 1970 there were 8,213 interns who were graduates of American or Canadian schools. Of these, 90 percent were in affiliated hospital positions. Similarly, of the 26,277 American and Canadian graduates who were residents, 92 percent were in university-affiliated programs. These percentages have been increasing steadily, and it is expected that virtually all American graduates will be in university-affiliated programs in the next few years. Thus nonaffiliated programs will be virtually nonexistent -- except perhaps as a training locale for foreign graduates. The two classes of institution could, as a result, become more distinct: on the one hand, the university-affiliated hospitals with their cadre of American graduates and a minority of hand-picked foreign trainees; on the other, the nonaffiliated hospitals staffed with foreign graduates who are technically also in educational positions.

The proportion of foreign graduates who are in affiliated and nonaffiliated programs has also been shifting. By 1970, as many as 75 percent of all foreign trained residents were working in affiliated hospitals (Appendix Table B6). Nevertheless, there remains a solid group of 4,700 foreign trained physicians working as interns and residents in nonaffiliated hospitals as against 3,000 American and Canadian graduates in the same group of institutions. The major contribution of foreign graduates is in the small and middle-size community hospital with 200 to 500 beds (Appendix Table B5 ii).

Nor is the proportion of foreign graduates evenly spread within the various categories. Many hospitals have house staffs which are composed entirely or predominantly of foreign physicians. A statistical review of affiliated and nonaffiliated hospitals by the AMA in 1967 found more than 300 hospitals (31 percent of the hospitals reporting) in which foreign medical graduates comprised more than 75 percent of the residents (Appendix Table B8). The figures are not broken down into affiliated and nonaffiliated hospitals; but it is evident that if they were, the proportion for the nonaffiliated hospitals alone would be more striking. In terms of both education and acculturation, the foreign intern or resident in those hospitals staffed predominantly with other foreign graduates -- in many cases with a group of his fellow nationals -- is disadvantaged, assuming he is seeking an American education and an American experience.

Mumford has pointed to some advantages for American graduates in seeking appointments in hospitals where there are foreign graduates. Assuming that physicians gravitate to training

in hospitals in areas where they wish to settle, a lack of potential competition among the other house staff for recognition by attending physicians is a definite career advantage, and may make for a more relaxed atmosphere for all the house staff.[6] She concludes that there may be an optimum number of American trained to foreign trained house staff. There is, however, at present no way of defining what the balance should be with respect to the general education of all physicians. The continuing difference in the type of responsibility and teaching available to students between (for example) a major university hospital and a relatively small community hospital, well documented by Mumford, probably makes any general distinctions untenable.

Interestingly, the AMA Council on Medical Education did try in 1962 to impose a quota-mix system on hospitals, dependent on the citizenship of its interns and residents. This followed the report of an *ad hoc* Advisory Committee on Internships and Hospital Services set up by the AMA to close the gap between supply of and demand for house staff, and also State Department concern that foreign graduates were not mixing sufficiently with Americans. The committee recommended that a hospital's total house staff of interns and residents should include at least 25 percent U.S. or Canadian graduates and that failure to fill this proportion for 2 successive years would endanger subsequent program approval. The Council on Medical Education, in endorsing the report, stated its belief "that all hospitals with approved programs share equally in the moral responsibility to participate in the educational exchange program."[7] But, once again, as in previous suggestions for quotas, the AMA House of Delegates did not agree; the Council was instructed the same year to drop any such requirement. Instead, in June 1963 the House of Delegates merely adopted a general statement which urged hospitals to appoint a reasonable number of foreign medical graduates into their training programs. "Reasonable" was not defined. Here the matter rests, with the machinery of program accreditation not being deliberately used to affect the distribution of foreign trainees (or for that matter of American graduates). That the relatively permissive system of accreditation does affect the distribution of graduates is incontrovertible. If, for example, the number of approved training posts had been limited to the available number of American graduates, the influx of foreign physicians would not have occurred; or if it had, it would have been much smaller. Accreditation remains a potentially powerful vehicle for developing physician manpower policies.

The relative distribution of American and foreign trained house staffs in affiliated and nonaffiliated hospitals is a matter of concern on several levels. The amount and type of education actually being given to foreign graduates demands critical evaluation, as does their role and function in hospital staffing. The recent survey of house staff policy by the Council of

6. Emily Mumford, *Interns: From Students to Physicians*, (Cambridge, Mass., Harvard University Press, 1970), 88.

7. *AMA Digest, Supplement* (1963) 184-85.

Teaching Hospitals (COTH) of the Association of American Medical Colleges has made a beginning in this direction.[8] But this study was primarily concerned with stipends, funding sources, and organization of house staff, and the results were not broken down between American and foreign graduates. As yet, far too little is known of what house staffs in hospitals actually do and what teaching they receive.

The COTH study found that nearly 7 percent of the budget of the average teaching hospital is spent for house staff stipends and fringe benefits.[9] The predominant pattern of funding intern and resident salaries is out of the revenue from patients in the teaching hospitals; i.e., it is the sick American patient (and his insurance coverage) which pays the costs of "educating" the American and foreign trained physician at the graduate level. Quite clearly, however, the hospitals are reaping substantial services in kind, in return for the physician's education. Carroll's pilot study of program costs in the Yale-New Haven Hospital found that the 140 interns and residents surveyed spend an average of 58.8 hours a week on patient care, out of a total working week of 79.4 hours.[10] While "patient care" and "education" are difficult concepts to disentangle in an educational period which is primarily an apprenticeship, these results point to the substantial service contributions of house staffs even in a major university hospital.

Cost benefit studies of the role of foreign medical graduates in all types of hospitals remain to be undertaken. It should be noted as one aspect of the largely nonaltruistic role of hospitals in the educational area, however, that even though house staff stipends have risen very rapidly in the last 5 years, the number of foreign trained interns and residents has not decreased; hospitals do not seem to have been discouraged from providing such "education." The average salary of an intern in 1970 was $8,031, and of a resident $7,542;[11] since then the latter category in particular has risen substantially. But even in 1970, assuming that foreign graduates received a salary similar to that of their American counterparts (in fact on average they probably receive more, since salaries in nonaffiliated hospitals tend to be higher than in affiliated hospitals), the aggregate amount spent by American hospitals on internship salaries for foreign graduates was in the region of $26.8 million, and on residency salaries of about $97.8 million, plus fringe benefits. If foreign trained physicians in these positions are providing value equal to their salaries, it would appear that they are contributing work worth at least $125 million a year to patients in American hospitals. Assuming, again, the privilege of averages, it can be estimated that the nonaffiliated hospitals are receiving about $36 million of service and the affiliated hospitals about $89 million. Such a system inevitably develops vested interests, ranging from the community hospital's reluctance to abandon its graduate training program, to the urge by hospitals to become at least nominally

8. COTH *Survey of House Staff Policy - 1970* Part 1, (Evanston, Association of American Medical Colleges, August 1970).

9. *Ibid.*, 20, 22.

10. Augustus J. Carroll, *Program Cost Estimating in a Teaching Hospital, A Pilot Study*, edited by Thomas J. Campbell and Mary H. Littlemeyer (Evanston, Association of American Medical Colleges, 1969), 76 and passim.

11. "Graduate Medical Education," *Journal of the American Medical Association*, 218 (1971), 1240.

university-affiliated, even though interns and residents may spend little or no time in university courses, to the disinclination of university hospitals to put their own residents in affiliated hospitals for training, although there might be opportunities for a wider range of experiences in such hospitals.

One further point relating to affiliated and nonaffiliated programs is the differential distribution of foreign medical graduates by specialty. As might be expected, foreign trained physicians play a relatively large role in short-supply hospital service specialties (anesthesiology and pathology) in non-affiliated hospitals, and also in specialties devoted to general or primary care. Thus, 66 percent of the first year general practice and pediatric residencies in nonaffiliated hospitals were filled by foreign trained physicians in 1968; 65 percent of those in obstetrics; and 61 percent in internal medicine and surgery. In each case the proportion of foreign medical graduates was much lower in university-affiliated programs (Appendix Table B4).

Distribution of Foreign Medical Graduates by Specialty and Area

The pattern of residencies by specialty also shows marked differences in the relative contributions by American and foreign trained graduates, taking all types of hospitals together (Appendix Table B3). Foreign medical graduates represent at least one-half of all residents in general practice (69 percent), physical medicine(62 percent), colon and rectal surgery (55 percent), pathology (54 percent), pediatric cardiology (54 percent), and anesthesiology (52 percent). On the other hand, they make a relatively small contribution to such specialties as ophthalmology (8 percent), orthopedic surgery (11 percent), new family practice programs (11 percent), dermatology (12 percent), and otolaryngology (14 percent). Quite clearly, the foreign trainee who comes for advanced training in pediatric cardiology or thoracic surgery in a major American institution before returning for a teaching or research career in his own country is fulfilling a different role in the American health care system than the foreign medical graduate in the average general practice residency in a nonaffiliated hospital. In the first case, the student is seeking advanced American skills. In the second, the educational benefits are doubtful, for general practice in the United States is very different from the general practice role accepted in many other parts of the world.

Detailed analysis of foreign trained physicians in different specialties has still to be undertaken, specifically their educational expectations from the training in different specialties, and the relevance of this training to their long term career intentions at the time of seeking entry to the United States. Analysis of specialty distributions by country of primary medical education is also needed, and the appropriateness of their distributions to apparent manpower needed both in the home countries and in

the United States must also be examined. Knobel's work (discussed in Chapter II) is a good beginning, and it is hoped that his present studies and similar data from the AMA will shed further light on who is doing what, for what apparent purposes, in the various specialty areas. The relative work and educational instruction of Americans and foreign graduates needs to be analyzed. But, above all, studies are required which establish educational and manpower projections, by specialty, for all physicians in the country. Only after such studies are completed can gross distributions be interpreted with any confidence, except insofar as they represent the hospitals' desire for house staff in the relevant specialties.

The uneven geographical distribution of foreign trained physicians should also be stressed. About one-fourth of all foreign trained physicians (10,999 of 45,816) in the United States are in New York City (Appendix Table D8). Taking the state of New York as a whole, foreign medical graduates represented about 19 percent of all physicians in 1959; the proportion has risen steadily, until now about 36 percent of physicians in the state are graduates of foreign schools (Appendix Table D1 iii). Other states notable for a rising and substantial proportion of foreign trained physicians are Connecticut, Delaware, Illinois, Maryland, Michigan, New Jersey, Ohio, Rhode Island, and West Virginia. In each of these states, foreign medical graduates now represent at least 20 percent of all physicians. In contrast, states such as Arkansas, Idaho, Nevada, Mississippi, and Utah have an insignificant proportion of foreign trained physicians. These patterns are expected to continue.

Some further comments should be made with respect to foreign trained house staff – again, as an indication of the hospitals' perceptions of need. Some observations can be made by comparing the proportion of residents who were foreign medical graduates by state (Appendix Table B10); foreign medical graduates as a percentage of the new medical licenses issued in each state (Appendix Table C10); and the percentage of total physicians in each state who are graduated from foreign schools (Appendix Table D1 ii).

Of the 12,943 residency positions filled in 1970 by foreign medical graduates, 5,276 were in the Middle Atlantic states of New York, New Jersey, and Pennsylvania. For sheer numbers of foreign trained residents, New York leads all other states, as it does in the number of foreign trained physicians as a whole. In terms of the relative contribution of foreign trained residents, however, New Jersey is the outstanding area. In that state in 1970, as many as 78 percent of all hospital residents were foreign medical graduates. Among other "high" states were Delaware (with 66 percent foreign trained residents), Rhode Island (60 percent), New York (52 percent), Illinois (49 percent), and Connecticut (48 percent). In these states, hospitals are substantially dependent on foreign medical graduates. At the other end

of the scale are states with relatively few foreign trained residents compared with the number of American and Canadian graduates: Alaska, Vermont, Nebraska, Mississippi, Arkansas, Oklahoma, Colorado, Utah, Calfifornia, and Washington. Internships follow a similar pattern, but in some cases the differences are even more marked. For example, in New Jersey, 84 percent of the internships in 1970 were filled by foreign medical graduates.

The marked differences in the recruitment of foreign house staffs by state, city, and hospital, demands attention which has not yet been forthcoming. Why, for example, does Nebraska have a much lower proportion of foreign medical graduates working as residents (6 percent) than Kansas (29 percent) or Missouri (33 percent)? Is this because some states are more attractive to American graduates than are others; or that they offer a relatively modest number of house staff openings, so that additional (foreign) graduates are not necessary? Or are there factors which pull immigrant physicians to some states over others? If the hypothesis is rejected that the physician about to take his ECFMG examination in Manila, Addis Ababa, or Rangoon is able to distinguish the relative educational advantages of residency training in his specialty in hospitals in Nebraska, Kansas, and Missouri (or for that matter in any other state), it must be that factors such as word of mouth, hospital recruitment techniques, or other public relations activities are in operation. These relatively straightforward questions have not yet been answered. As with much of the current debate over foreign medical graduates, observations rely not on adequate information but on speculation. For example, is the rumor that Colombians tend to congregate in New Jersey, Chicago, and Long Island borne out by the data?

Some basic information for analysis is now available in a detailed breakdown of 1970 statistics on foreign medical graduates, published in 1971 by the American Medical Association.[12] These figures provide a fruitful source for research. Some preliminary analysis has been undertaken by Dr. Thomas D. Dublin of NIH. But as yet no detailed research has been done utilizing the raw data.

A brief review of the statistics for the large group of Philippine medical graduates taking licensing examinations in the different states in 1969 did indicate some state preferences by these physicians, who presumably intend to remain in the United States to practice. As many as 985 Philippine graduates took state licensing examinations in 1969 (572 of whom passed). The candidates were bunched in California (107), Indiana (143), New Jersey (101), and Pennsylvania (153). Other states with 50 or more Philippine candidates in 1969 included Maryland (50) and New York (63). The remainder were scattered over the states, with most states having at least one Philippine candidate.[13] Presumably some factors are working in the large supply states to encourage these patterns, and it is reasonable to expect the

12. J. N. Haug, B.C. Martin, *Foreign Medical Graduates in the United States, 1970*, (Chicago, American Medical Association, 1971).

13. Figures are drawn from "Medical Licensure Statistics," *Journal of the American Medical Association*, 212 (1970), 1936-37.

distribution of Philippine graduates in internships and residencies to follow a similar pattern. Statistical analysis of data in AMA files will readily determine the interrelationships. It is worth remarking, however, that the fact that such analyses have not been made, at least until the present, is an indication of a general lack of interest in the plight of the foreign medical graduate.

Logic would suggest a pattern of hospital recruitment of foreign trained physicians to internship and residency posts, subsequent employment of some of these house staff in full-time senior hospital positions and, for those who remain in the United States, permanent location (and licensing) in the same state. Some interrelationships have been pointed out in an article by West.[14] They can be illustrated by a look at current figures in New Jersey – a state which deserves particular analysis with respect to the flow of foreign trained personnel, from the time of recruitment to full-time careers. There were 3,224 foreign trained physicians in New Jersey in 1970, of whom 982 were interns and residents and 657 on full-time hospital staffs. Thus, one-half of the foreign trained physicians were working in hospitals; most of the remainder (1,291 of 1,585) were in private office-based practice. Countries contributing the greatest number of interns and residents included the Philippines (288), India (160), and South Korea (58). Many other countries were represented but no other country contributed as many as 50 physicians to graduate medical education.[15]

New Jersey has a high proportion of foreign medical graduates in house staff positions, in full-time hospital staff positions, and in private practice. Indicative of the considerable flow of physicians from training into full-time practice (in hospitals or office-based), New Jersey also has an exceedingly high proportion of foreign trained physicians who have been granted new licenses in the past few years. As many as 78 percent of new licentiates in New Jersey in 1970 were foreign medical graduates (Appendix Table C10). It is presumably the result of the total recruitment and licensing process that foreign medical graduates now represent 30 percent of all physicians in the state (Appendix Table D1 iii), with substantial clusters in Atlantic City, Jersey City (where 38.5 percent of all physicians were foreign trained in 1967, and the current percentage may well be higher), Long Branch, Newark, New Brunswick, Paterson, and Trenton (Appendix Table D8). It is still not known, however, exactly how far New Jersey is training her own supply of physicians, from the point of immigration to permanent practice, and how far the state is a beneficiary of physicians who took graduate training in other states.

Cohort studies of foreign trained physicians in other states are beginning, however. Preliminary findings of a study by Stevens, Goodman, and Mick of a cohort of foreign trained physicians who were appointed to internship and residency

14. Kelly M. West, "Foreign Interns and Residents in the United States," *Journal of Medical Education*, 40 (1965), 110-29.

15. J.N. Haug, B.C. Martin, *Foreign Medical Graduates in the United States, 1970*, 142-43.

16. Rosemary Stevens, Louis Wolf Goodman, Stephen Mick, "Foreign Graduates in Connecticut: A Follow-up Study of Foreign Trained Physicians working in Connecticut Hospitals in 1964," unpublished manuscript, Yale University, 1972.

17. Kelly M. West, "Training for Medical Research: The World Role of the United States," *Journal of Medical Education*, 39 (1964), 238 - 64.

positions in all hospitals in Connecticut in 1964 show that 24 percent of the cohort were still in Connecticut in 1972, and that 79 percent were still somewhere in the United States.[16] In addition, Knobel is undertaking a follow-up study of foreign trained physicians in Georgia. These studies should do much to clarify the total process of assimilation of foreign physicians not only into house staff positions, but from these positions into American medical practice.

Contribution of Foreign Trained Physicians to Manpower in the United States

Foreign medical graduates in house staff positions are a major aspect of the whole "brain drain" phenomenon, because these positions act as a point of ready access to permanent practice in the United States. But by no means all foreign physicians are in hospital practice. More than 20,000 foreign medical graduates were in office-based practice in 1970; these, of course, include physicians who have arrived in the United States at any time in their careers. Over 4,000 foreign trained physicians were in medical teaching or research, and 1,200 in administration (Appendix Table D3).

Relatively speaking, however, foreign medical graduates contribute only a small amount to office practice; only 11 percent of the physicians in office practice in 1970 were graduates of foreign medical schools. This may be expected to increase in the future, however, as more physicians pour out of graduate educational posts. Foreign medical graduates have long made a substantial contribution to American medical research, however. Even after the slow-down in federal biomedical research funds over the last few years, foreign trained physicians still comprise 28 percent of those in medical research (Appendix Table D4). It would appear, then, that the United States is not only benefiting from practitioners trained abroad, but is also developing its own knowledge substantially.

A study undertaken by West a decade ago attempted to throw light on the "brain drain" effects resulting from the substantial sums of money available for biomedical research in the halcyon days of research funding, which began in the early 1950's and ended only in the late 1960's.[17] His interest was in the situation and future plans of foreign research trainees on National Institutes of Health (NIH) grants, many of whom were physicians, and in the impact their choices would have on world health manpower. Data for the project were derived from a great variety of sources, including an analysis of the status of past and present NIH supported foreign investigators and assistants working on NIH supported research projects; questionnaire interviews with all foreign research workers under the age of 40 and trainees at four academic medical centers in different parts of the United States (a survey of 81 individuals, or an estimated 90 percent of all the young foreign investigators and research

trainees in these institutions); and informal interviews with other foreign trainees. This selected group of foreign trainees appeared to be successful in acquiring positions at institutions where the competition was most intense; about 15 to 20 percent of the group expected eventually to immigrate permanently to the United States. Not surprisingly, he concluded that the United States is the recipient of substantial foreign aid in terms of the number of biomedical scientists. It was noted, too, that even if a foreign country loses only an average of *two* to *three* of its biomedical personnel in a year, these numbers build up over a period of time; in some countries the magnitude of loss that might be reached after a period of 10 years could be serious. Vest also argued that more attention should be paid to the fact that the appointment of a large number of trainees from developing countries serves to direct the limited medical manpower of these countries away from areas of higher priority, even if the trainees do return to their countries of origin. Instead of returning to public health practice and rural health programs — the most pressing needs in most undeveloped countries — they will be likely to remain in research activities.

These observations are still valid, even though the study itself needs updating in the light of the manpower and funding situation of the 1970's. To date, manpower studies of resources for medical research undertaken by the National Institutes of Health have taken little note of the substantial role of foreign medical graduates.[18] This whole area demands examination, if only in terms of the development of future educational and immigration policies for physicians wishing to come to this country to learn specialized research techniques.

The pattern of immigration to jobs in hospitals and in research has resulted in relatively few foreign medical graduates in federal employment; most are employed by nonprofit hospitals or universities, or are in private practice. A 1959 survey found 781 foreign trained physicians in federal employment out of a total of 15,154 (Appendix Table D1 i). Eleven years later there were 3,637 federally-employed foreign graduates out of the total of 57,217 (Appendix Table D7). In the former year the foreign trained group represented 4.5 percent of federal physicians; in the latter 6.4 percent. The latter figure was less than the proportion of foreign graduates in the physician population at large.

Other ascriptive attributes of foreign medical graduates should be noted in comparison with overall physician manpower distributions in the United States, for they throw into relief some of the major characteristics and problems of the American medical system. Foreign medical graduates, while predominantly male, include a much larger percentage of females (15.3 percent) than among their American counterparts (6.0 percent) (Appendix Table D12). The difference undoubtedly reflects the very small number of women accepted into U.S. medical schools

18. See e.g. *Biomedical Research Manpower — For the Eighties*, Resources for Medical Research, Report No. 11, United States Department of Health, Education, and Welfare, December 1968.

compared with other countries, rather than any particular immigration or recruitment policy. Indeed, there are actually *more* foreign trained women than American trained women in graduate medical education in the United States: 2,800, as against 2,500 American and Canadian graduates (Appendix Table B11).

The distribution of foreign medical graduates by sex emphasizes the overwhelming masculinity of the American medical profession. Other characteristics of the foreign trained physician population throw different elements to light. Beside being predominantly male, the American medical profession is also overwhelmingly white. Of the 34,708 U.S. and Canadian medical graduates who were in internship and residency positions in 1970, only 632 were black U.S. citizens. One interesting factor in the present situation is that black students, having had difficulty in securing admission to American medical schools, or for other reasons, have sought medical education abroad in relatively high numbers. Besides the 632 black American graduates in 1970, there were another 360 black U.S. citizens in house staff positions who were graduates of foreign schools (Appendix Table B12).

A further distinctive characteristic of American medicine is its focus on major cities, a characteristic shared by the foreign trained population. Foreign medical graduates, like their American counterparts, gravitate toward large urban areas. Less than 10 percent of all foreign medical graduates were located in nonmetropolitan areas in 1970 (Appendix Table D9).

In theory one would expect the influx of foreign medical graduates to fill gaps in the geographical distribution of physicians in the United States. A study by Butter and Shaffner has disproved the theory with some force, however.[19] The investigators compared the spatial distribution of all physicians with that of American trained physicians, making a distinction between the aggregate impact and the distributional impact of foreign trained physicians. Their results indicated that in the nation as a whole, foreign medical graduates have increased rather than decreased the inequality among states in terms of physician distribution. Indeed more than one-half of the foreign trained physicians in the United States are located in states where their presence makes the already existing inequalities more extreme. The same holds true for the inequalities between urban and rural areas. Although doctor/population ratios are a relatively crude way of measuring the availability of health care, the study's results have important implications in terms of health manpower problems and planning from the American point of view, for it appears that foreign physicians are serving to make the "rich" states richer, rather than to help areas in this country which need physicians the most. Yet perhaps even this statement is too simplistic, given the enormous variations in types of care and different kinds of institutions among particular regions of

19. Irene Butter, Richard Schaffner, "Foreign Medical Graduates and Equal Access to Medical Care," *Medical Care*, 9 (1971), 136 - 43.

the United States.

New York is a cogent example of a broadly "rich" state in terms of physicians, yet one with serious manpower problems in certain sectors -- most notably the public hospitals in New York City -- and one in which the use of foreign trained physicians is high. In the early reports of *Open Doors*, the Institute of International Education surveyed patterns of institutional staffing of interns and residents; it no longer does so. The early patterns of public hospital staffing were clear. Bellevue Hospital, for example, had 114 foreign interns and residents in 1957. King: County Hospital Center, Brooklyn, had 104 foreign house staff in 1964, a greater number of foreign trained physicians than was congregated for advanced medical training at the Mayo Clinic in that year.[20] Similar patterns have undoubtedly continued. Indeed, the New York public hospitals, despite efforts to upgrade their teaching role and status through affiliations with voluntary hospitals, might well have sunk without the substantial help of foreign trained physicians. Similar statements can be made of public hospitals in a number of other major cities, and of at least some large state psychiatric institutions.

But, while throwing into relief the problems of the American medical manpower system, the existence of an army of foreign trained physicians has delayed constructive criticism of the utilization and distribution of American trained physicians. There has been an Alice-in-Wonderland discrepancy between the array of educational opportunities made available for American graduates and the supposed major needs for physicians in actual practice. When proportional distributions of trainees and practitioners by specialty are given (as in the AMA's annual "Graduate Medical Education" report), they tend to include the foreign trained physicians in internships and residencies, thus clouding the long term picture. By enabling decisions to be delayed about the number and distribution of physicians who ought to be trained for the American health care system, the availability of thousands of foreign medical graduates has allowed American interns and residents the privilege of virtually unlimited choice of specialty and practice area, and hospitals to substitute internship and residency posts for staff positions.

Some emerging patterns of American trained medical manpower with regard to specialty can be seen in Appendix Table B4: the major emphasis on training surgeons, the small number of general practice trainees, the relatively large number of psychiatrists. The development and indications of these trends have been explored elsewhere.[21] Suffice it to say here that the geographical and specialty distributions of graduate (vocational) training posts for American graduates bears little promise for a more balanced distribution of physicians in practice in the United States. As with the foreign trained physicians, all else being equal, the richer areas and the more glamorous specialties will get more physicians, thereby widening the gap between them.

20. *Open Doors*, 1957 (New York, Institute of International Education), 9; *Open Doors*, 1964, 10.

21. Rosemary Stevens, "Trends in Medical Specialization," *Inquiry*, 8 (1971), 9-19.

22. "Medical Education in the United States," *Journal of the American Medical Association*, 214 (1970), 1512-13.

23. See Rosemary Stevens, *American Medicine and the Public Interest*, 530-35 and passim.

24. Lowell T. Coggeshall, *Planning for Medical Progress through Education; A Report*, (Evanston, Association of American Medical Colleges, 1965). *The Graduate Education of Physicians*. Citizens Commission of Graduate Medical Education, John S. Millis, Chairman. (Chicago, American Medical Association, 1966).

Recent Trends

It is into this largely unplanned and unregulated training situation that the foreign medical graduate has been injected. A major evaluation of the number and types of graduate educational positions cannot long be delayed, however, and any such evaluation will inevitably demand an assessment of the role of the foreign graduate. First, since 1968, the professional associations as well as the federal government and other groups have strongly articulated the view that a general shortage of physicians exists in the United States. This view has led to a rapid increase in the number of students in American medical schools. Recent estimates indicate a rise in the number of first-year students from 8,700 in 1965 to 13,600 in 1974—although it is possible that this latter figure may be reached this year.[22] It appears too that there will be increasing federal support earmarked for American medical schools for undergraduate medical education. Both of these movements will generate increasing concern over the subsequent distribution of American trained physicians by geographical area and specialty; for if federal tax dollars merely accelerate existing trends toward (for example) more and more surgeons in New York and relatively fewer pediatricians in Mississippi, the manpower "shortage" will, if anything, get worse and not be eased. The omens are thus toward influencing, if not regulating, the career choices of American physicians.[23]

A second factor influencing physician manpower is the impending passage of some kind of national health insurance legislation. It is outside the purposes of this paper to speculate on which bill, which combination of proposals, or which compromise is likely to be most successful; or what the expected results will be. Any accepted entitlement to a standard package of insurance benefits, however, will have marked results on physician manpower distributions: whether through increased expectation on the part of the population that a standard insurance entitlement should mean a reasonably equitable package of services (including appropriate physician manpower in an area); or through new forms of reimbursement to hospitals, which will affect the amounts they can charge in patient fees for house staff education; or through more direct controlling mechanisms.

Finally, there is a general movement toward university responsibility for graduate medical education, a movement accelerated by the Coggeshall report of 1965, and the report of the Millis Commission in 1966.[24] If this is in fact to be achieved, the universities will have to reassess their own educational role in the vocational education of physicians, including the desired distributions of foreign trained to American trained physicians in their affiliated programs.

All these movements demand the establishment of manpower norms, however crude, for the development of an appropriate supply of physicians in the United States. The

current situation is one of an implied shortage of physicians in this country, the corollary of which is supposedly the importation of foreign trained physicians. So many qualifications hedge both of these statements that the areas for a precise assessment of the contribution of foreign medical manpower to the United States are extremely limited. The concept of "shortage" is uncertain and relative. In terms of other countries, the United States has an abundance of physicians. Even in terms of attempts to project the size of the shortage in the United States, there are vast differences of opinion.[25]

Whether foreign physicians have been imported to meet this shortage is a statement which needs to be questioned. Available evidence indicates that foreign manpower has been imported to serve specific roles, particularly in hospitals, rather than to fill a general manpower need. The fact that many foreign physicians have stayed in the United States is largely a secondary result of this primary activity. Nevertheless, the cold fact remains that 63,391 of the 334,028 physicians in the United States in 1970 received their primary medical education outside the United States. This education represents a huge net gain to this country in terms of value received for medical education.

Contribution of Other Countries to the Medical Education of Americans

One question to be faced is whether the increasing number of places being made available in American medical schools will (or should) serve to reduce this intake of foreign graduates. A special feature of this question is the contribution now being made by foreign countries to the education of American students in their schools.

Applications to U.S. medical schools since World War II have consistently exceeded the number accepted by about two to one (Appendix Table E1); despite a relatively rapid increase in the number of places, the excess is expected to increase in 1972. In 1970-71 alone, nearly 13,500 applicants were turned away from American medical schools. Paradoxically, many of these unsuccessful applicants have a much better basic premedical education than many foreign medical graduates who are imported from abroad as interns. Yet, at the internship level, as has been remarked, there are now nearly two posts available for every American medical graduate (Appendix Table E2). In short, there is an apparent bottleneck in undergraduate (MD) education.

In the interim, many American students have chosen, for one reason or another, to seek their medical education abroad. The Institute of International Education estimates that in 1969-70 there were more than 3,300 Americans studying medicine abroad (Appendix Table A11). U.S. students are believed to be enrolling in schools outside the U.S. and Canada at a rate of 500 per year.[26] It is also estimated that less than

25. See e.g., W. Lee Hansen, "An Appraisal of Physician Manpower Projections," *Inquiry*, 7 (1970), 102-13.

26. Henry R. Mason, "Foreign Medical Schools as a Resource for Americans," *Journal of the National Association of College Admissions Counselors*, 5 (1970), 16-20.

27. Henry R. Mason, "A Profile of 314 Americans Graduating From Foreign Medical Schools," *Journal of the American Medical Association*, 209 (1970), 1196-99.

28. David McL. Greeley, "American Foreign Medical Graduates," *Journal of Medical Education* 41 (1966), 641-50.

29. Alms C. McGuinnes, "ECFMG Examinations, United States Citizen Candidate Performance," *Journal of the American Medical Association*, 214 (1970), 1685-86.

one-half of those Americans entering foreign schools actually finish the full course and return to the United States with acceptable credentials.[27] These figures may be underestimates. The licensing statistics in the United States point to a steady in-flow of American graduates of foreign schools in the order of 200 to over 400 a year (Appendix Table C12); and these figures include only those successful in the licensing examinations. Altogether, 5,972 U.S. born physicians from foreign schools were identified in the United States in 1970 (Appendix Table A12).

The most interesting study yet done about Americans in medical schools abroad is Greeley's analysis of ECFMG candidates for 1964.[28] Greeley estimated that of the 500 to 550 Americans abroad at that time, about 300 received degrees and took the ECFMG examination. He reviewed the records of 303 persons who had taken their premedical education in the United States and then gone abroad for their medical education. The great majority (72 percent) had applied to American medical schools. Their performance on the standard Medical College Admissions Test was significantly lower than that of students who were accepted by American medical schools. Most were from the Northeastern states; more than one-third were of Italian descent. Of the whole sample, 40 percent had attended schools in Italy, 15 percent in Switzerland, 10 percent in Germany, and 9 percent in Mexico; the remainder were scattered among a variety of countries. Most of the students thus took their medical education in a foreign language. Only 57 percent passed the ECFMG examination the first time, but Greeley expected at least 70 percent would pass eventually. What would happen to the others was not clear.

A more recent analysis of ECFMG applications from U.S. citizens by McGuinness found a similar predominance of students in Italy.[29] A total of 1,165 examinations were taken by U.S. citizens (including 123 Puerto Ricans) between September 1968 and February 1970, an average of 290 for each of the four examinations given in this period. Of the 1,165 candidates, 426 were from medical schools in Italy, another 199 in Spain, 140 in Mexico, and 109 each in West Germany and Belgium. Other countries, with a smaller number of U.S. candidates, were Austria, France, Ireland, the Netherlands, and Switzerland. In this study, under 30 percent of the candidates passed the ECFMG examination.

The foreign aid implications of these distributions are interesting. Many foreign schools are subsidized by the governments of the countries concerned, thus providing a direct governmental form of U.S. fiscal relief. In some cases, too, the American students may represent an indirect form of relief by taking places which would otherwise be filled by nationals of those countries, thus removing a source of long term future investment. Assuming that the United States is experiencing a

doctor shortage and welcomes such physicians back, a policy of U.S. Government subsidy to such schools would seem logical, particularly if current proposals for per capita grants to medical schools for medical students are enacted. The problem is, however, extremely complex, given the very varying standards of medical education abroad, as well as the varying admissions standards.

In fact, for most schools concerned, American students represent substantial benefits. The schools benefit from American fees; the foreign communities from dollar incomes. Presumably the United States also benefits, from not having to build additional educational facilities. But whatever the economics, some schools clearly welcome Americans. It is no coincidence that agencies exist to help Americans enroll in foreign schools, and that some schools (notably those in Mexico) advertise for students in the American press.

The mixed responses in the United States to the presence of Americans in training abroad are reflected in as yet unimplemented provisions in the Comprehensive Health Manpower Training Act of 1971. This Act allows for a program of both loans and scholarships for qualified American students to study medicine abroad, on terms similar to those made for study in American schools. In an attempt to maintain equivalent standards, three special requirements would be imposed on the recipients. Students would have to produce a letter from an American medical school stating that they had met the qualifications for admission, but were not accepted because of space limitations. In addition, after their third year abroad they must have passed Part I of the National Board examinations and have applied for transfer to an American medical school. Finally, they would have to provide assurances that they intended to return to the United States to practice for at least 5 years. These provisions contain some difficult questions for implementation (notably, how precise American medical schools can be in certifying that admission was denied solely because of space limitation). Even if implemented, the provisions would probably apply only to a minority of Americans in foreign schools. Since no funds have been made available to implement the provisions, however, these concerns may remain academic. Meanwhile the underlying questions remain, including the financial and policy implications of foreign medical education of Americans, for both respective foreign countries and the United States.

McGuinness found 329 American candidates for the ECFMG at Bologna in a two-year period, 71 at Louvain, 63 at Guadalajara, 54 at Salmanca, 53 at Rome, and 52 at Heidelberg. Mason's studies of foreign schools have also thrown light on the total number of American students in some institutions. He found a total of 630 Americans at Bologna, many of whom had apparently gravitated there because "it is a matter of putting in the time to complete the courses required for a degree."

30. A study of interns in New Jersey hospitals bears out this assumption. American graduates and foreign medical graduates were tested pre and post internship through scores on Part III of the National Board examinations. Marked improvements were shown in both groups; 33 percent of the foreign medical graduates in the study converted from a "fail" to a "pass" score during the one-year internship period. Edwin O. Hirsch, "An Evaluation of the Internship Experience in New Jersey Hospitals (1966-67)," *Journal of the American Medical Association*, 209 (1969), 20 1-34.

31. A recent study has indicated, however, that Part I of the National Boards is a reasonable predictor of success. See Joseph C. Bamford, Jr., "Student Transfers from Foreign Medical Schools," *Journal of Medical Education*, 46 (1971), 431-35. See also Henry R. Mason, C.H. William Ruhe, "Students Transferring from Foreign to U.S. Medical Schools in Advanced Standing, 1959-1966," *Journal of Medical Education*, 44 (1969), 561-70.

Students are usually required to study there for 7 years. In other schools in Italy, Mason found 100 American students in Rome (where the third and fourth years of course work, pathology and pharmacology, appeared to be a major stumbling block), and about 60 at the University of Padua. He also reviewed schools in a number of other European countries and in Mexico, where the Autonomous University of Guadalajara is the major attraction for Americans. All told, he found a total of 2,343 American students in the 16 schools surveyed (Appendix Table E5). Each school was thus making a substantial contribution to American medical education (or, assuming that many of the Americans did not complete the courses, was wasting part of its resources).

The experience of Americans in foreign medical schools, and after, has barely been explored. Mason's profile of 314 successful applicants to state licensing boards in 1963-1965 is one effort in this direction. These physicians represent the cream of U.S. foreign medical graduates, in that they achieved equal standing with their American trained peers through the licensing examination. On average, they spent longer than if they had attended American schools (5.43 years, with longer required for those who had to learn a foreign language). Most stated that they were satisfied with the quality of education they received abroad; it was claimed that clinical training was insufficient, but that this could be compensated for by an American internship. Many complaints voiced by individual Americans who have been to foreign schools related not to their education, but to a feeling of discrimination on returning to the United States, in terms of jobs available, licensing, and incorporation into the American medical profession. One physician interviewed by the authors, remarked: "I couldn't get into an American medical school and felt basically discriminated against. I then went to a medical school in Switzerland and was discriminated against because I was an American. And then I came back and found it difficult to get the kind of internship I wanted. Now I'm in practice I've also found it difficult getting hospital staff privileges." We suspect these feelings are general, although as yet confirmatory findings are not available.

The differences between an American medical education and that of many countries abroad can be significant, and the mechanisms of transfer into the U.S. system are still far from easy. The Association of American Medical Colleges has set up a coordinated transfer service, COTRANS, to help Americans abroad transfer into American medical schools. Registered students may take Part I of the National Board Examinations (basic sciences);[30] if they pass, they have a reasonable chance of entering an American school. Many schools appear reluctant to admit foreign transfer students because of the difficulty of evaluating their performance.[31] A total of 76 students transferred to American schools in 1969-70, chiefly into the third year of medical education, most of them from schools in

Switzerland (Appendix Table E6). Such transfers are trivial compared with the total number of Americans in foreign schools.

Transfers at a later stage of education are more difficult, and are currently a cause of concern and complaint from American foreign medical graduates. The ECFMG generally requires not only the full completion of the medical educational requirements in the country of medical education before granting eligibility for its certification, but also that the candidate have reached the point in his education where he is eligible for licensure in the country of his medical education. Since some countries require students to take an internship there before issuing a license, and since hospitals will not usually appoint physicians directly into a residency, this means that American foreign medical graduates, like their foreign counterparts, may have to take an additional year of internship -- in some countries comparable to an American internship, but in others more like an undergraduate clerkship -- after receiving their diplomas for didactic work.

Mexico is one country with such a requirement and a place where many Americans go to study medicine. Graduates of Mexican schools must serve a one-year internship and 6 months of social service after medical school before being eligible for a license; only then are they considered truly medical "graduates." Having been thwarted in attempts to circumvent this requirement, six American medical students at Guadalajara have filed a suit in the Federal Court for the Southern District of New York, on behalf of all the American students at the University, charging the AMA, the American Hospital Association, the ECFMG, and the Joint Commission on the Accreditation of Hospitals with violation of the Sherman and Clayton Anti-trust Acts. They maintain that the ECFMG's policy of requiring foreign trained physicians to reach the point of licensure eligibilty before being admitted to its examination discriminates against American students in Mexico, by forcing them to spend an extra 2 years before being able to take an American internship. This in turn, it is alleged, is compounded by the policies of the AMA, the AHA, and the Joint Commission which effectively penalize hospitals which accept Americans from foreign medical schools who do not hold ECFMG certification, through loss of accreditation of both the graduate medical education program and the hospital itself. A decision in this litigation is still awaited.[32]

American foreign medical graduates have found support for their cause from several states interested in attracting more doctors to both their public and private hospitals. New Jersey has been in the forefront of this movement. In April 1971, legislation was passed in that state exempting American foreign medical graduates from any internship or service requirements outside the United States and from ECFMG certification, a measure that was immediately appealed by the AMA. Similar legislation is now on the books in Connecticut and California. In addition, New Jersey has developed a new examination to

32. In point of fact, the medical education curriculum in Mexico is meant to be a six year program, with the internship more nearly resembling the clinical clerkship of an undergraduate medical student in an American school. More often than not it is the student's first contact with patients. The ECFMG, commenting on these features, has argued that if it were to allow Americans to fulfill only a portion of the curriculum it would in effect be making a qualitative judgment on the medical education program in Mexico, which is not its function. Such a measure would also, of course, discriminate in favor of Americans and reinstate citizenship as a component in determining fitness for patient care in American hospitals.

replace the ECFMG. Lacking any change in policy on the part of the AMA, most hospitals in New Jersey have declined to take advantage of the new law. Nevertheless, the issue remains of who is to set standards for those coming into residency training. Is this a matter of safeguarding hospital patients, selecting foreign students for advanced specialist training, or providing professional treatment for Americans?

The AMA has been the focal point of many of the pressures, and its policy with regard to American foreign medical graduates has been modified in light of them. As of July 1971, foreign medical graduates are being allowed to substitute a year of supervised medical training under the direction of a medical school approved by the Liaison Committee on Medical Education for the internship required by a foreign school. To gain such a position, the student must pass a screening examination such as Part I of the National Boards, the ECFMG, or the FLEX examination. After successful completion of this supervised clinical training, the student is eligible to enter an AMA-approved graduate training program. While not nearly as permissive as the New Jersey legislation, the new AMA policy, appealing as it does primarily to Americans, is potentially an opening wedge toward differential treatment for American citizens and foreign nationals graduating from foreign medical schools.

This confusion in direction reflects the general confusion in physician education and manpower development in the United States. As long as foreign medical graduates are seen and used as a reserve pool to supplement a shortage of American medical manpower, there will be little chance for new approaches to physician manpower, or for effective policies and planning in terms not only of the absolute number of physicians, but also their distribution, both geographically and by specialty. Hospital staffing shortages are critical to the current situation. As long as these can be met by the use of outside resources, there is little impetus to consider the role of the physician in the hospital or to reevaluate the service versus the educational functions of the internship and residency. For example, the development of paraprofessional roles, such as those of the physician assistant and nurse practitioner, is in a rudimentary state. Yet a clearer concept of these positions could be a positive move away from total reliance on physicians for all the functions they are currently performing. If such a situation developed, it might then be possible to conceive of bringing foreign physicians to the United States for educational programs which are geared toward their needs and those of their home countries. For the moment, the United States is able to avoid coming to grips with many educational and manpower problems through the use of foreign physicians who flock enthusiastically to her shores. In such a situation, both the foreign medical graduates and the American public may be victims.

QUALIFICATIONS, TESTING, AND LICENSURE: THE ROLE OF PROFESSIONAL ORGANIZATIONS

2

A continuing difficulty in approaching the migration of medical personnel is the variety of background and experience represented by physicians from different schools and different countries. In terms of immigration regulations, there clearly has to be an occupational definition of "physician." But the notion that foreign medical graduates constitute a homogeneous group breaks down in the face of individual realities: the diverse abilities of persons from different countries, with differing types of medical education, and unequal facility with the English language. The throng of foreign trained physicians contains a wide variety of potential talents: graduates of excellent medical schools in English-speaking developed and developing countries; the cream of a nation's medical talent coming for further education before returning to medical school teaching or research; American citizens who are undertaking medical education in a foreign language, in countries such as Mexico, Italy, or Switzerland; and graduates of large schools of varying quality in both developed and developing countries throughout the world. In addition, regardless of the innate ability and knowledge of the practitioners, foreign medical graduates come from a wide variety of cultural settings.

While there is now substantial information about the characteristics and distribution of the total pool of foreign medical graduates in the United States, precise figures are not yet available as to the professional intention of each new crop of physicians who enter the United States every year. The majority of foreign trained physicians undoubtedly come to this country with the primary intention of acquiring further training. But, in addition, a significant number seek to enter directly into some type of professional practice in the United States; and these presumably include many of the 29,000 physicians who entered

on immigrant visas in the 10-year period 1962-1971 (Appendix Table A2). Even in the case of those physicians whose original intention was to return home, the attractions of practicing medicine in the United States can be strong. In any event, all physicians in graduate medical training are at a convenient point of entry into the American medical professions. As a result, the predominant reaction to the "foreign medical graduate" from the professional organizations of medicine, traditionally responsible for physician competence, has not been one of controlling numbers, nor even of reviewing the type and appropriateness of their American education, but rather of designing measures and tests to safeguard standards in American medicine.

Development of the ECFMG

The medical profession was clearly not prepared for the influx in the 1950's of a substantial number of physicians trained outside the United States or Canada. No overall selection procedures existed whereby competence could be measured and house staff chosen on the basis of some recognized criteria. Compounding this difficulty was the fact that even interns and residents engaged in direct patient care; thus, more than educational questions were involved. A means of exercising a degree of control over those who were to fill these positions became a pressing professional concern.

There are two clearcut ways in which candidates can be screened: by careful review of the education which led to the MD degree or its equivalent, or by an independent examination. The first in effect tests medical schools; candidates from approved schools are accepted, candidates from unapproved schools are disallowed. The second method tests individuals. In lieu of an inspection of the medical school attended, each individual is rated on the basis of scores on a standard test.

All American and Canadian medical schools are accredited by joint professional committees; there is thus a continuing watch on standards as a whole. In addition, the great majority of American medical students now take Parts I and II of the examination given by the private National Board of Medical Examiners, the first usually after two years of medical school, the second at the end of the fourth. This too acts as a standardizing device. Such mechanisms are not available for foreign schools. While medical schools tend to offer the same types of curriculum, there is no international accrediting committee, nor accepted reciprocal standards from one country to the next. Any country attempting to measure the standards of immigrating physicians, therefore, must develop its own list of approved schools according to some criterion or require an examination.

The American approach began with an attempt to approve foreign schools. Beginning in February 1950, the Council on Medical Education and Hospitals of the American Medical

Association and the Executive Council of the Association of American Medical Colleges (AAMC) cooperated in the joint publication of a list of foreign medical schools, whose graduates they recommended for consideration on the same basis as graduates of approved medical schools in the United States and Canada. This list, which was designed primarily to be of assistance to licensing boards, was always qualified to the effect that it was tentative and not complete. Schools not on the list were neither approved nor disapproved; information on which to evaluate them was simply insufficient.[1] It was further stated that this list should not be considered equivalent to the granting of approval to medical schools in the United States and Canada. Ultimate responsibility for evaluating the medical credentials and qualifications of individual foreign trained physicians, whether from listed or unlisted schools, rested with those organizations seeking their services, not with the sponsors of the list.[2]

The method by which the list was compiled was haphazard to say the least. Foreign medical schools were included in the list strictly on the basis of information furnished by recognized American medical educators who were able to visit these schools during their travels abroad.[3] No school could be included on the list solely upon information furnished by the school itself, by its graduates, or by any foreign government or agency. Furthermore, the Councils were unable to maintain sufficient staff to carry out appraisal visits, nor would they accept offers of subsidized inspections for their representatives.[4]

It is not unfair to say that the list reflected the travel biases of its compilers.[5] Of the 39 schools listed only three were located outside western Europe, despite the fact that a substantial proportion of foreign medical graduates came to the United States from developing nations.[6] Although the list was reviewed each year until 1960, it reached its peak in 1954 and no new schools were added after this time.

It became increasingly apparent that it was impossible for the two Councils to acquire and maintain continuing and adequate knowledge of the educational programs of all foreign medical schools whose students come to the United States for graduate medical education. To begin with, the vast majority of foreign trained physicians entering the United States were from schools not on the list. Furthermore, the list itself had certain built-in drawbacks. The method of evaluation excluded those physicians who graduated from schools offering sound education in medicine but whose programs had deteriorated during or after World War II, while at the same time aiding those doctors who graduated from what had previously been a weak school that by then had a strong medical program.[7] Finally, the notion of evaluating schools rather than individual accomplishment was recognized to be unsatisfactory.

1. "Medical Education in the United States," *Journal of the American Medical Association, 161* (1956), 1661.
2. *Ibid., 159* (1955), 601
3. *Ibid., 161* (1956), 1661.
4. *Ibid., 156* (1954), 165.
5. The final listing of recommended foreign medical schools included four schools in Belgium; one in Brazil; one in the People's Republic of China (this recommendation applied only to those individuals who had been awarded their MD degrees up to and including the class of 1943); one in Denmark; two in Finland; one in Lebanon; four in the Netherlands; one in Norway; three in Sweden; five in Switzerland; and 16 in the United Kingdom. *Ibid.*, 159 (1955), 602.
6. According to J. E. McCormack and A. Feraru ("Alien Interns and Residents in the United States," *Journal of the American Medical Association, 158* (1955), 1357-60), the 12 countries having the largest number of foreign medical graduates in the United States during 1954-1955 were Philippines (776), Canada (520), Mexico (425), Germany (323), Turkey (253), Italy (242), Cuba (184), China (170), India (165), Korea (151), Greece (144), and Japan (139).
7. "Medical Education," (1956), 1661.

In 1954, a Cooperating Committee on Graduates of Foreign Medical Schools, including members of the AMA, the AAMC, the AHA, and the Federation of State Medical Boards, was formed. While recognizing America's responsibility to share its educational advantages, the Committee felt that its primary concern must be with the quality of medical care in the United States; in order to insure that medical care continued at its present high calibre, all foreign trained physicians should be able to give evidence of having reached a level of medical knowledge comparable to that achieved by physicians trained in the United States and Canada. The primary objective of the Committee, therefore, was to create a mechanism for measuring educational attainment independent of a thorough and continuing knowledge of numerous foreign medical schools. Instead of attempting to appraise the educational programs of hundreds of foreign schools, it was deemed more sensible to evaluate the medical qualifications of individual foreign medical graduates. In 1956, the Cooperating Committee endorsed the concept of an examination program and set up an organization, the Educational Council for Foreign Medical Graduates (ECFMG), to organize and administer this.[8]

The intent was two-fold: to assist in preserving the high standards of health care in the United States by determining the competence of individual foreign physicians, and to facilitate the entry of those of proven ability who were ready to benefit from the unique qualities of graduate education in American hospitals. The by-laws of the new organization made these objectives explicit. The ECFMG was to serve the public interest through the establishment of a program of education, testing, and evaluation of foreign trained doctors, in order to insure that these physicians were properly qualified to assume the responsibility for patient care in an American hospital. At the same time, it was to promote and expand graduate educational opportunities for foreign medical graduates, thereby assisting these doctors in raising the level of medical care and education in their countries. Toward this end it was to disseminate information concerning programs, requirements, and procedures for internships and residencies in the United States, so that foreign physicians might be in a position to receive maximum benefit from these programs.[9] It was not intended, however, that the ECFMG should act in any way as a placement agency. Individuals were to continue to make their own arrangements with the hospitals.[10] The first examination was given in March 1958, and they have been given semi-annually since then.

The AMA took two important policy positions which greatly helped the establishment of the ECFMG. First, in 1958, the AMA and the AAMC announced the withdrawal of their list of recommended foreign medical schools, effective January 1, 1960. In lieu of this list, it was recommended that certification by the ECFMG be accepted as evidence that the applicant's

8. The ECFMG was initially called Evaluation Service for Foreign Medical Graduates.

9. "Bylaws of Educational Council for Foreign Medical Graduates (As Amended through July 14, 1969)," *Annual Report 1970: The Educational Council for Foreign Medical Graduates*, 25.

10. "The Present and Future Status of Foreign Medical School Credentials in the United States," *Journal of the American Medical Association, 167* (1958), 1526.

medical knowledge was comparable to that of uates of approved American and Canadian medical schools.[11] During the interval between July 1958 and January 1, 1960, both forms of recommendation would be honored.[12]

Second, the AMA stated that after July 1, 1960, no hospital should expect to maintain an approved internship or residency program unless its appointees who were foreign trained either: (1) had a full and unrestricted state license to practice; (2) were in their final six months of training; (3) had secured certification from the ECFMG; or (4) had been given a contingent appointment for not more than 6 months based on their having been accepted for the September 1960 ECFMG examination. Any extension of the appointment beyond December 31, 1960 would depend on certification by the ECFMG.[13]

This announcement carried considerable weight. Experience in an approved graduate educational program is necessary for a physician to become a candidate for the examination of one of the 20 American specialty boards, and thus (if successful) to receive specialist certification. Almost all states require candidates for licensure to have completed an approved internship. Approval as a teaching hospital also carries with it a certain prestige for the individual hospital. Thus, the accrediting process for graduate medical education could be used effectively to enforce the employment of foreign trained physicians with the ECFMG certification. Only recently, as will be discussed, has this chain of authority been challenged. In addition, the AMA's endorsement of the ECFMG was joined by the American Hospital Association (AHA); future hospital registration by the AHA would be dependent upon meeting these requirements.

Nevertheless, implementing the policy was somewhat more difficult than merely enunciating it, and considerable complaint was heard from the hospital administrators. The latter estimated that 15 percent of the foreign trained physicians in the United States would have to return home after June 30, 1960, because of their failure to secure ECFMG certification.[14] As a result, these changes did not go into effect until July 1, 1961, a year later than originally intended. Once implemented, however, the policy was largely effective. All interns and residents had to have the ECFMG certificate.

For hospital administrators, the development of the ECFMG examination was a mixed blessing. While not disagreeing with the principal of an examination to evaluate individual competence, many objected to the restrictions which were put on whom they could appoint to house staff positions. As one New York hospital administrator put it: "The ECFMG should simply publish the results and let the hospital decide whether it wants a man who got a score of, say, 50. In my opinion, it's better to have a poorly trained intern than no intern at all."[15]

11. It is interesting to note just how long use was made of this outdated list. As late as February 1967, an AMA survey of the state boards found that a few states continued to use the list. If a candidate in these states was a graduate of one of the schools on the list, he was :pted for examination. If his school was not on the list, the board was inclined to search the school's curriculum and credentials. In addition, four boards, Connecticut, Kentucky, Maine, and Minnesota, maintained their own lists of acceptable foreign medical schools. Clearly, efforts to regularize the situation of foreign medical graduates have been made more difficult because of the autonomy of the state boards. "Medical Licensure Statistics," *Journal of the American Medical Association, 200* (1967), 1084.

12. "Present and Future Status," 1527.

13. Council on Medical Education and Hospitals, "Policy for ForeignMedical Graduates," *Journal of the American Medical Association, 172* (1960), 1045.

14. E. Kirsch, "Proposed Modification of Foreign Physician Program, A Program to Facilitate Certification of Foreign Physicians So That They May Serve as Interns in the U.S.," *Journal of the American Medical Association, 176* (1961), 603.

15. L. Hoffman, "Foreign Graduates: What's Being Done to Make Them More Helpful to You in the Hospital," *Medical Economics* (1960), 110.

16. *Ibid.*, . 105.
17. L. R. Chevalier, "The Foreign Doctor Dilemma," *Medical Economics* (1961), 114.

Predictions of an intern shortage if ECFMG certification was required were wide spread. According to the New York Hospital Council, this would not be a major problem for university affiliated hospitals, but the nonaffiliated ones might well be in serious difficulty.[16] If these hospitals were not able to obtain an adequate supply of interns and residents, the work they normally did would have to be done by someone else -- presumably someone fully trained. Thus, if the number of foreign medical graduates on staffs were cut, the cost to patients for hospital care could be expected to rise.

But the hospitals were concerned for reasons other than economics. There was a strong feeling that the quality of patient care was as likely to suffer in an under-staffed hospital as in one that had foreign trained physicians who could not reach the level of ECFMG certification. According to the director of a Paterson, New Jersey hospital: "It's easy to sit behind a desk in Chicago and frame ideals about quality of care. But a supposedly nonqualified doctor can put on a tourniquet and give the usual drugs and plasma for shock to tide the patient over until an American trained doctor gets there. And that's better than having the patient die."[17] The quote encapsulated the crisis in American medicine. Chauvinism, Flexnerism, and paraprofessionalism were all at stake.

However imperfect it might be, and viewpoints on this varied, the formation of the ECFMG represented the first attempt on the part of the medical profession to develop a policy toward foreign medical graduates. This was largely a negative one of exclusion and restriction, however, with poor doctors being kept out through the traditional means of a testing system. With respect to standards, the establishment of the ECFMG was a recognition that the uncontrolled entry of foreign trained physicians could jeopardize the quality of health care in the United States and a denial of the hospital administrator's view that any doctor was better than none. The ECFMG was never intended to be a panacea for all the various problems attendant on the rapid influx of foreign trained physicians.

Unintentionally, the new examination emphasized the dilemma of the foreign graduate in American graduate medical education. The ECFMG might take as its primary measure the candidate's potential for learning during his American experience, but linked to this -- because of the very nature of the residency as an apprenticeship -- was the possible harm he might do to patients in hospitals in the United States. Supervised education and service could not be distinguished.

Function of the ECFMG

The ECFMG has developed from its relatively modest beginnings in 1957 to a major professional regulatory organization. Its examination is given in 42 centers in the United States, 4 in Canada, and over 120 centers in other countries (Appendix Table C1). By the end of 1971, more than 144,000 foreign trained physicians had sat for the examination, of whom slightly less than 95,000 had ultimately passed (Appendix Table C2). Ultimately is an important qualification. Applicants are allowed unlimited opportunity to take the examination. Thus the overall rate of success is 65 percent, whereas the pass rate for any particular test is approximately 38 percent. Some physicians take the test at 14 or more sittings. The total number of candidates sitting the examination is now almost 30,000 a year. The ECFMG is thus handling more candidates than its companion organization, the National Board of Medical Examiners, in its three-part examination for U.S. medical students and graduates.[18]

The development of examination centers abroad has alleviated the sometimes desperate situation of foreign physicians coming to the United States before having passed the ECFMG examination. Because candidates may take the examination as often as they wish, there is a continuing pool of repeat candidates for each examination (about 40 percent). What happens to repeatedly unsuccessful candidates, particularly those already in the United States, deserves careful examination, for the present requirement of ECFMG certification for house staff appointments and most of the state licensing examinations effectively bars these candidates from working as clinicians. Of the 30,000 examinations taken at the two sessions in 1970, more than 22,000 were conducted abroad (Appendix Table C3). There still remains, however, a shifting group of 4,000 or 5,000 foreign trained physicians in this country who appear at U.S. examination centers and who are presumably in jobs in laboratories and in other roles which do not involve responsibility for patients. In passing it should be remarked that while many in the group will eventually pass the ECFMG, they represent the equivalent of the total annual output of physicians from several underdeveloped countries.

To pass the examination, candidates have to score a grade of 75 or higher in a multiple-choice medical test, pass an English test, and produce acceptable credentials as to their education and training. In recent years the passing rate on the medical portion has been between 32 and 46 percent (Appendix Table C4). The ECFMG is thus acting as a potent screening test (even though its standards are still lower than many would like). The English test is also of the multiple-choice variety, with the candidate responding to questions in a narrative presented in spoken English. The inability to speak fluent English has been one of the more frequent criticisms made of foreign trained

18. In 1970, the National Board examined 21,886 persons for Parts I, II, and III of the National Board examinations; the ECFMG examinations, also based on National Board materials, handled 29,890 candidates. *National Board Examiner, 18* (March 1971), 1.

physicians. Interestingly, however, most candidates pass the ECFMG English test; the pass rate was over 90 percent in September 1970. As might be expected, candidates who passed the medical test did rather better on English than those who failed.

What one makes of this depends on a variety of factors. Testing to determine language ability, particularly the kind of idiomatic, spoken English with which the interns and residents will have to deal, is a highly specialized process, and one, it should be underscored, which is not the primary purpose of the ECFMG. Whereas it is clearly the underlying responsibility of the ECFMG to test medical competence and to determine a basic knowledge of English, it is more appropriately the job of the employing hospital to ensure that its house staff can effectively communicate with patients. A few hospitals have in fact attempted to provide solid teaching of English as part of the house staff program. For example, to avoid the danger of foreign physicians without a good command of the language being "more or less sloughed off into a corner and told to look at slides," the pathology staff in a Jacksonville, Florida hospital developed a system of deliberate language training, including a rule that only English would be spoken in the hospital, close individual supervision and review of house staff, and a requirement that house staff dictate (rather than write) their findings.[19]

But language remains a fundamental obstacle. Only 7.6 percent of the total foreign medical graduate population in the United States come from countries where English is the primary language.[20] The hospitals thus have a *de facto* responsibility to give or to arrange language training. Unfortunately, few have done so. A survey of hospitals in Philadelphia in the late 1960's found that at least one-half of the 700 foreign trained interns and residents in that area would have benefited from one or more language courses and that the great majority were not getting them.[21]

That the English language cannot be automatically absorbed from conversations on the wards (even if this were desirable) can be illustrated by a recent editorial on the high failure rate of foreign medical graduates in the licensing examination in Kentucky. The editorial noted the inability to understand English as a factor in the failure rate[22] – even though applicants for the Kentucky license must have completed at least 5 years of training in the United States in an institution approved by the licensing board and be U.S. citizens. What languages were the applicants using during their 5 years in training? Such comments raise questions not only of the responsibility for language education, but also about the peculiar culture of American hospitals (perhaps a reflection of a general depersonalization of American medicine), which rates personal communication as of little importance to patient care, and education of graduate students as a matter of laboratory tests and the acquisition of

19. A. Foraker, "A Positive Approach to the Foreign Pathology Resident," *Archives of Pathology, 88* (1969), 453-54.

20. J. N. Haug, B. C. Martin, *Foreign Medical Graduates in the United States, 1970, 5.*

21. A. Sutnick, "The Trainee from Abroad," *Annals of Internal Medicine, 68* (1968), 1127-28.

22 S. Overstreet, "Foreign Medical Trainees," *Journal of the Kentucky Medical Association, 68* (1970), 115-16.

other "scientific" techniques. These questions should be laid at the doors of the employing hospitals and their medical staffs, however, rather than at those of the ECFMG.

In contrast to the ECFMG's English test, a minimal screen to eliminate those who clearly cannot comprehend spoken English, the medical test and evaluation of credentials are ambitious. As a general policy, the ECFMG requires that each candidate have passed both parts of the examination, have successfully fulfilled the complete medical curriculum required by his medical school or the country in which it is located, and have completed satisfactorily all of the educational requirements for a full and unrestricted license to practice medicine in his country of medical education. These requirements are equally binding on all foreign medical graduates regardless of citizenship or nationality. A successful candidate usually first receives an interim certificate, valid for 6 months once he is in the United States, Canada, or Puerto Rico. To obtain the standard certificate, the candidate must clear his financial account.[23]

Candidates are not supposed to sign a contract of employment with a U.S. hospital until they have received an interim or standard ECFMG certificate. In applying for such a post, the candidate may send the hospital a photocopy of the letter from the ECFMG stating that he has passed the examination, even though the check of his credentials may not be complete. There is thus a delay of at least several months between the examination and a hospital appointment. In theory, the candidate first passes the ECFMG, then writes to U.S. hospitals (using as a basis the AMA's annual Directory of Approved Internships and Residencies or direct personal contact). He may then have to wait further for the ECFMG to document his credentials, gain an employment contract, and obtain a visa for the United States.

The time lag involved means that there is at any one time a pool of successful ECFMG candidates who have not yet arrived in the United States. Thus, any restrictive change in ECFMG requirements would not be immediately effective. For example, 11,916 candidates (most of whom were abroad) passed the medical test in 1970, but only 5,436 standard certificates were issued in that year, almost all to physicians who were by then in the United States or Canada.

The majority of ECFMG certificates are now being granted to graduates of developing countries. The biggest single group of certificates awarded in 1970 was to graduates of schools in India (791 certificates), with the Philippines second (366); these two countries accounted for over one-fifth of the ECFMG certificates in 1970. Other countries with relatively large numbers included Korea (229), the United Arab Republic (208), the United Kingdom (220), and West Germany (203). One-fifth (1,080) of all the standard certificates issued in 1970 were to physicians in the state of New York. Other relatively large importing states, in descending order, are Illinois, Ohio, Maryland, New Jersey,

23. This requirement may sound simple. It should be noted, however, that candidates who have taken the examination several times may have spent a significant sum relative to the physician's income in his own country; the first examination has a fee of $65, and each subsequent examination one of $45.

Pennsylvania, and Massachusetts, each of which attracted more than 200 foreign medical graduates with new ECFMG certificates in 1970. These 7 states accounted for over 50 percent of all the ECFMG certificates issued to physicians in the United States in 1970 (Appendix Table C6).

The ECFMG, as a screening examination for hospitals, cannot be held personally accountable for physician manpower distributions in other countries, any more than it can in the United States. But the ECFMG has acquired quasi-public importance in American medicine through the recognition of its certificates by other agencies; specifically, the Residency Review Committees of the various specialties and the AMA Council on Medical Education. As has been noted, removal of approval for internship and residency training seriously jeopardizes the position of the hospital in attracting house staff, in addition to lowering its professional standing.

It is interesting to note, however, that as late as March 1971 the Council on Medical Education felt compelled to issue a warning to hospitals, state medical societies, and state licensure boards about the seriousness of appointing foreign medical graduates without ECFMG certification to graduate educational programs. The statement cited "repeated episodes" of individuals receiving certification and subsequently requesting credit for time spent in training programs prior to certification. Yet the requirement for internship and residency positions are distinct and unambiguous on this matter: ECFMG certification, a full and unrestricted state license to practice, or, in the case of American foreign medical graduates, provisional possession of a state license, to be issued upon the successful completion of an internship or residency in that state.[24] Without speculating as to the intent of such practices, a warning of this nature would appear to indicate a significant effort to circumvent the ECFMG.

The Joint Commission on Accreditation of Hospitals (JCAH) is a second, largely professional group with enormous influence over hospitals. One reason used by the JCAH for nonaccreditation is the employment by hospitals of foreign medical graduates without license or ECFMG.[25] Since accreditation is necessary for hospitals to participate in the large governmental Medicare program, this kind of recognition is a potent force. Most state licensing boards require foreign medical graduates to hold the ECFMG certificate as a prerequisite for licensure. In addition, the majority of the specialty certifying boards also expect foreign graduates to hold the ECFMG certificate. It is true that the requirements in some cases state the possession of the ECFMG or the National Board certificate, but since the foreign graduate is specifically excluded from the examinations of the latter, the result is the same. The American Hospital Association also supports the ECFMG certificate, both in policy statements which stress its "material assistance to hospitals by screening foreign medical graduates and identifying those who are compe-

24. "FMG Certification Warning," *American Medical News*, March 8, 1971.

25. "AMAgrams," *Journal of the American Medical Association, 207* (1969), 451-52.

tent to p[illegible] patient care activities in our hospitals,"[26] and in the mo[illegible]angible professional activity of refusing to allow hospitals which employ foreign graduates without the certificate to be registered members of the Association.

In all these respects, the ECFMG certificate acts as a kind of "license" for foreign medical graduates to practice as interns and residents in U.S. hospitals, and to move from these positions into independent practice. As with other forms of license, it tests at a minimal level, hopefully screening out the patently unsafe practitioner, but not pretending to certify excellence or to act as a manpower policy-making body. From time to time it has been suggested that regional quotas be established for the number of ECFMG certificates issued,[27] or that the ECFMG should stop certifying specialists from countries with physician-population ratios of, say, less than 1:2,000. These suggestions, if acted on, would change the nature of the ECFMG, making it more of an immigration-control organization on the one hand, and an educational planning unit on the other. But while the ECFMG has been involved since 1963 in a number of informational and advisory services for foreign physicians, and is now making a substantial financial contribution to the new Commission on Foreign Medical Graduates (which is studying the effects of existing policies and programs), there has been no indication that it wishes to go any further than this.

As it is, the ECFMG is in a position rather similar to that of the National Board of Medical Examiners, another private testing organization with substantial derivative authority. Both will inevitably be forced to evaluate the uses being made of their certificates and the alternative channels for regulation in unsatisfactory educational and manpower situations. The reduction of graduate educational positions in U.S. hospitals, in terms of both absolute numbers and in their distribution by specialty, would clearly have a substantial impact on the importation of foreign physicians. So would any attempt to make medical schools directly responsible for foreign graduates. So, too, would restrictions in the immigration laws and visa regulations. As in much of the debate over foreign physicians, however, the arguments tend to be circular, of the "pass-the-buck" variety. At present the ECFMG is a major vehicle for criticism of the "foreign medical graduate situation" – perhaps for the reason that it is a national, centralized (and efficient) agency, with high visibility. It is, moreover, in a strategic position to effect change.

The ECFMG, National Board, and Licensing

The existence of two private examining agencies, one for American graduates, the other for foreigners (including American graduates of foreign medical schools) has itself been a cause of concern. The relationship between the ECFMG and the National Board is close, with the National Board's own pool of questions being drawn upon for both sets of examinations.[28] But the

26. Quoted in *Annual Report 1969: ECFMG*, 29-30.

27. See: P. Crane, "An Unresolved Problem for Developing Countries: Korea as Exhibit A," *Journal of the American Medical Association, 209* (1969), 2039-41; B. Pasamanick, "American International Medical Immorality," *American Journal of Orthopsychiatry, 40* (1970), 11-13.

28. For a discussion on the role and function of the National Board, see John F. Hubbard, *Measuring Medical Education: The Tests and Procedures of the National Board of Medical Examiners* (Philadelphia, 1970).

ECFMG has always been an independent organization, and the lines between it and the National Board have recently become more distinct. As early as 1954, the National Board agreed to limit admission to its certifying examinations to graduates of approved medical schools in the United States and Canada. Foreign trained physicians are thus automatically excluded from these credentials. Until 1969, the National Board acted as the agent for the ECFMG, setting up test centers and administering the examinations. The increasing volume of candidates for both organizations led to these functions being separated in July of that year. There is thus a separate system of credentialing for U.S. and foreign trained physicians.

The two examination systems are structured very differently. The National Board provides a progressive series of three examinations for American and Canadian medical students, usually taken after the second and fourth year of medical school, and after a year of post-graduate internship. The ECFMG can examine physicians only after their basic medical education. Instead of providing the equivalent of the 6 day series of the National Board tests, which altogether are commonly used as a basis for licensure, the ECFMG offers a 1 day screening examination (supposedly the equivalent of Part II of the National Board examinations) that is designed not for licensure but for readiness for graduate education in the United States. The purposes of the two systems are thus basically distinct.

How the ECFMG results actually compare with those of the National Board has been a subject of much debate. Rumblings that the ECFMG certifies at a lower level of competence than is expected of American graduates led to a statement in 1966 from the AMA Council on Medical Education, the ECFMG, and other groups that "agencies in the United States concerned with the medical qualifications of graduates of foreign medical schools consider certification by the ECFMG as evidence that recipients of such certification have medical knowledge at least comparable to the minimum expected of graduates of approved medical schools in the United States and Canada."[29] But the rumblings were not quieted. In a rather bitter series of letters in the *New England Journal of Medicine* in 1967, several foreign trained physicians aired their grievances concerning the differing treatment given to U.S. and foreign graduates by having separate-but-equal examination systems. One physician teaching in a New York medical school pointed out that the fact that he had graduated from a Swiss and not an American medical school meant that he could act as an examiner for the National Board, but not be a candidate.[30] Yet another criticism of this dual testing system came from the 1967 Report of the National Advisory Commission on Health Manpower, which recommended substituting Part II of the National Board examination for the ECFMG.[31] Nothing, however, has come of this up to the present.

29. "Committees of the House of Delegates: Council on Medical Education," *Journal of the American Medical Association* 198 (1966), 437.

30. "Correspondence," *New England Journal of Medicine*, 277 (1967), 1097-98.

31. National Advisory Commission, *Report*, 74.

The intrinsic labeling process involved in having the two sets of examinations – one for foreign medical graduates (including Americans trained abroad), the other for domestic graduates – has been a matter of some concern. Neither the ECFMG nor the National Board is a licensing agency, and they have no direct influence over the state medical examining boards. But the existence of two examinations makes it possible for a state to allow American graduates to be licensed on the basis of National Board qualifications (i.e. by endorsement, with or without additional examinations and requirements), but not give similar endorsement for the ECFMG. While the whole licensing system, even for American graduates, is fraught with problems of interpretation of the state variations, licensure by endorsement of credentials or reciprocity is relatively widespread.[32] In contrast, the foreign medical graduate usually starts from scratch in each state. Derbyshire's survey (1969) of the 25 states which refused to license foreign medical graduates by endorsement of other qualifications included the question, "If a world-famous medical scientist or professor, a foreign graduate, applied for licensure by endorsement would you make an exception for him?" The answer for 22 of the states was a flat "No;" all had to take the state examinations.[33]

The variations in requirements among the various jurisdictions are summarized in Appendix Table C9. They have been amply criticized by Derbyshire.[34] The ECFMG certificate is required in 47 jurisdictions. Eight boards require physicians to have full U.S. citizenship, and another 32 required a declaration of intent. Until recently, several states also required citizenship within a specified period. Virginia still automatically voids the license if citizenship is not acquired within 7 years. Citizenship is thus apparently recognized by the examining boards as a necessity for effective medical practice (in part a heritage of the restrictive requirements built into licensing in the 1930's). California takes this implication to its logical extent. It requires less of a foreign trained physician who happens to be an American citizen than it does of a foreign national. The latter must hold an actual license to practice in his home country, while the American need not even get to the educational point where he could be licensed if he were a foreign national. This practice has reportedly brought about threatened legal action by the government of the Philippines, charging that the California licensing law discriminates against foreigners.[35]

A number of boards require more than 1 year of internship (the usual requirement for American trained physicians), and several specify graduate education in the state. Louisiana, which has reciprocal agreements with most other states for American and Canadian graduates if the candidate has 1 year of internship or experience, provides no similar reciprocity for foreign graduates; the latter must take an examination, have passed the ECFMG, and have had 3 years of graduate training, of which 1

32. Altogether, 27,068 licenses were issued to physicians in 1970. Of these, 17,733 were on the basis of reciprocity or endorsement. "Medical Licensure Statistics, 1970," *Journal of the American Medical Association, 216* (1970), 1784.

33. Robert C. Derbyshire, *Medical Licensure and Discipline in the United States* (Baltimore, The Johns Hopkins Press, 1969), 144.

34. *Ibid.*, 143-49.

35. The requirement of citizenship imposed by some boards and some state licensing agencies may well be unconstitutional as the result of recent legal decisions. In particular, in *Graham v. Richardson*, 91 S. Ct. 1848 (1971), the Supreme Court unanimously held that states could not discriminate against aliens with respect to welfare laws. Mr. Justice Blackmun, in speaking for the court, conceded that under the principles of "equal protection" states had discretion to classify on "a reasonable basis." But the Court's decisions have established that classifications based on alienage, like those based on nationality or race, "are inherently suspect and subject to close judicial scrutiny." His further reasoning suggests that the Supreme Court, as presently constituted, would not look favorably on citizenship requirements by public agencies such as state medical licensing boards or quasi-public agencies such as specialty boards. On a rather different basis, the Supreme Court of Alaska struck down the citizenship requirement for admission as an attorney (Application of Daill Park, 1971); cf. the Supreme Court of Connecticut (Application of Fre' La Poole, 1972).

36. "Licensing Rules Said to Plague Foreign MD School Graduates," *Medical Tribune*, November 16, 1970.

year must be in Louisiana. It is not surprising that foreign trained physicians feel discriminated against. Indeed, the maze of requirements for licensing, sometimes involving a loss of five years of professional practice while awaiting citizenship, was a major topic for complaint at a meeting of the new American Association of Foreign Medical Graduates at the end of 1970.[36]

In addition, a number of states offer limited licenses or educational permits in large part as a means of waiving licensing restrictions for employing institutions which seek the services of foreign medical graduates. In Alabama, for example, a limited license is available for foreign trained physicians teaching at the University. Connecticut and several other states require foreign medical graduates to have a temporary permit to serve as an intern or resident in the state. West Virginia issues an annual license to foreign medical graduates working in state hospitals (which do not require the ECFMG examination) and in private hospitals (which do); a distinction is thus made as to relative basic quality between these two types of institutions, presumably to meet the former's greater staffing needs. And so on.

The injection each year of several thousand foreign trained physicians into the state licensing system has thrown into relief the rather unreal function of the licensing system as presently operated. In 1970, candidates before the state examining boards numbered 12,087 physicians. About one-half of these (6,124) were foreign medical graduates (Appendix Table C10). The licensing system supposedly tests a physician's competence. American graduates are able to take the examination after only a year of graduate education, however, even though they will not be regarded as fully trained until three or more years of graduate education have been undertaken. In fact, the examination primarily tests a candidate's basic knowledge of medicine; in some respects it is a gauge of his undergraduate education rather than his fitness to practice in his chosen specialist area.

For American and Canadian graduates, success in Part III of the National Board examinations provides a gauge of a candidate's abilities at the point of licensure. There is no equivalent for foreign medical graduates since they are, at least at present, excluded from the National Board examinations. The ECFMG examination (parallel to Part II of the National Boards) was not designed with licensure in mind.

As a result, most state examining boards rely on the performance of foreign medical graduates in licensing examinations. State boards are not usually generous about admitting foreign medical graduates without examination, even when the physician has already received a license in another state. In the years 1966-1970, only 535 of 11,299 licenses issued to foreign trained physicians were by reciprocity and endorsement, the majority in New York. In contrast, the great majority of

American trained physicians received licenses through endorsement of their National Board qualifications or through recognition of a license in another state. The relationship of licensing to the National Board examination is thus clearly different from that of the ECFMG, and statements about their equivalency – as presently utilized – can be misleading.

Quite clearly, there is a difference in purpose between a screening examination that helps hospitals choose qualified house staffs, and a thorough examination for full licensure designed to protect the general public. In theory, house staffs work under supervision. The license, in contrast, is supposedly a sign that the physician is ready for independent work. Thus the degree of responsibility for patient care is technically different, although it is very difficult to be precise. On the one hand, house staff are clearly engaged in patient care.[37] On the other, the license, examining physicians after only 1 year of graduate training rather than after the 4 or 5 years necessary for the acquisition of specialist techniques, is not examining the level of competence required for specialist practice. Within this framework, there has been a continuing difference of opinion between hospitals and state examining boards over the purpose of the ECFMG examination, the latter taking the view that the ECFMG "still feels primarly obligated to the hospitals."[38]

In turn, the hospitals would suffer if, as was suggested by the National Advisory Commission on Health Manpower, the passing score for the ECFMG were raised from 75 to 80.[39] So, of course, would many hundreds of physicians aspiring to specialist training in the United States. Only 12 percent of the candidates sitting the ECFMG examination in February 1969 would have passed, instead of the 38 percent who attained the passing score of 75.[40] If standards were raised, the pool of potential house staff for American hospitals would be substantially reduced. (In addition, assuming the score of 75 is indeed equivalent to the passing score of the National Board Part II examination, such a move would be discriminatory, requiring more of foreign than of American trained physicians). There is thus a continuing discrepancy in expectations between the licensing agencies and the hospitals. The ECFMG stands in the middle.

One potential instrument for rationalizing the thorny problems of licensing is the recent development of a movement to standardize state requirements for licensing through a common federal examination. Aware of the problems of state variations, for those who have passed the National Board examination as well as foreign medical graduates, the Federation of State Medical Boards established a new Federation Licensing Examination (FLEX) in 1968, designed specifically as a standard test for licensure in the states. FLEX draws on the National Board's pool of questions and has been developed closely with the Board. In effect, it combines the three parts of the National Board examinations which are now taken over a time span of about

37. A sidelight on the convolutions of licensure is a legal case, *Lindsey v. Michigan Mutual Liability Insurance Co.*, (156 So 2d. 313, La 1963). In this case, a Mexican-trained intern was sued by a patient for negligence. The patient also sought to find the hospital negligent in appointing a graduate from a Mexican school who was not a citizen and could not qualify for a license to practice, but this plea was disapproved. "Law and Medicine," *Journal of the American Medical Association, 214* (1970), 209.

38. Derbyshire, *Medical Licensure*, 146.

39. National Advisory Commission, *Report*, 74.

40. ECFMG, *Annual Report 1970*, 12.

three years (Part I, basic science; Part II, clinical science; Part III, cases and clinical judgment) into a single, 3 day examination. Unlike the National Board tests, which begin in medical school, FLEX is designed for physicians who are in house staff positions or in practice (e.g., a physician desiring to move from one state to another).

In theory, the new examination offers a standard test of competence for both American and foreign medical graduates. As FLEX becomes widely adopted by the states, it could have two important implications for foreign trained physicians. First, it would clarify and ease the licensing requirements for foreigners, and facilitate geographical mobility. Second, it would release the ECFMG from the responsibility of being the sole standard setter for foreign trained physicians.

By the end of 1971, the FLEX program had been adopted by 29 states for use as their official board examination. One further state will begin using it in 1972, and other states are expressing interest. It appears that FLEX will indeed become a standard test for licensing for those without the National Board examinations. The latter will be recognized as the primary vehicle for licensing-by-endorsement for American and Canadian medical graduates. There will thus be two forms of licensing by endorsement, through the National Boards or through FLEX.

States do not have to apply FLEX both to American and to foreign graduates, however. How far the states will actually accept foreign medical graduates on the same terms as American medical graduates taking FLEX remains to be seen. Derbyshire's poll of boards which refuse to license foreign medical graduates by endorsement discovered only five which would consider the foreign trained physicians who passed FLEX as qualifying for a license by endorsement; another 19 said they would not, and one did not know.[41] The FLEX program is still too new for final patterns to be determined; in 1970, however, it was already serving one-third of all licensing examinations, and it appears that a majority of physicians taking examinations are now taking FLEX.[42]

Logic would suggest that foreign physicians seeking full licensure in the United States should pass the FLEX examinations, assuming that these do in fact provide the best testing of knowledge and capabilities that exists. Assuming that these examinations have some validity, there should not be two sets of criteria for physicians (domestic and foreign) who will have one legal entitlement: recognition by a state for full, unrestricted practice.

Determination of competence, however, is always a slippery issue. It has plagued not only the licensing boards, but also the specialty certifying boards, some of which also have special examinations for foreign medical graduates as well as special certificates for them. There are, however, a number of disturbing questions in considering the response of professional agencies to

41. Derbyshire, *Medical Licensure*, 144.

42. In 1970, FLEX was administered to 4,032 candidates, out of a total of 12,087 examinations. "Medical Licensure Statistics 1970", *Journal of the American Medical Association*, 216 (1971), 1806.

foreign trained physicians. If state licensing examinations cannot judge competence, why have them at all? If the foreign trained physician who undertakes a full-length program (approximately 4 years) of graduate education in an American hospital, in an approved position as specified by the appropriate specialty boards, is still inferior to the U.S. graduate, where have the graduate educational programs failed? At the point of acceptance? Or during training? What do the great discrepancies in failure rates of foreign trained physicians in the states really mean — the lack of failures in Iowa, as against the 92 percent of failures in Ohio (Appendix Table C10)? These and similar questions color any examination of the response by the medical profession to the influx of foreign trained physicians. All deserve examination in the broad context of graduate medical education in the United States, and in terms of the goals and implications of licensure and certification.

These general questions are beginning to be scrutinized by the professional organizations. The establishment of FLEX, the announcement of a major evaluation of its aims and policies by the National Board, and the attempts at closer federation of the specialty certifying boards in the American Board of Medical Specialties, are three notable current activities. Until a major overhaul is made of existing policies toward testing and evaluating competence by such professional groups, the plight of the foreign trained physician will probably be neglected. Recognized goals as to the regulation of education, testing, and manpower distributions of *all* physicians in the United States are needed before the foreign graduate can be fully assimilated.

But, while the policy issues are paramount, to await the ponderous circle of events begs the question of competence *per se*. A growing body of evidence indicates that as a total group, and for whatever reasons, foreign medical graduates do less well on standard tests than their American counterparts. Part and parcel of the discussion of the machinery of organization, therefore, are a series of question marks: about relative knowledge and/or competence, about what examinations are really testing, and about the relations between testing and education.

The Question of Competence

The ECFMG annual reports contain a distribution curve of the actual performance of foreign trained physicians on that examination compared with what would be expected for American graduates, on the basis of the latter's performance on the same questions in National Board examinations. This indicates a markedly higher theoretical score for Americans than that actually achieved by the foreign graduates. It is estimated that almost 80 percent of the former would achieve a score of 80, compared with only 12 percent of the foreign graduates (Appendix Table C5). It is difficult to interpret such figures in

any but general terms, since they do not take into account the variation in language, education, and skills inherent in the groups, familiarity with multiple-choice techniques, and other factors. Three groups of ECFMG candidates in 1969 may be used in illustration. Of 689 Australian graduates, 648 passed the ECFMG examination. Graduates of West German schools, in contrast, working in a second language, scored far less well; only 338 passed out of a total of 692. Finally, of the 3,827 Philippine trained physicians taking the examination in 1969, only 306 were successful.[43]

These variations have tended to muddy the results of studies of the professional competence of foreign graduates. Margulies, for example, in a random survey of 156 hospitals with internship and residency programs, paired U.S. and foreign graduates for the purpose of evaluation, taking all foreign graduates as one group.[44] Interns were paired randomly and residents according to specialty. When pairing was impossible the foreign medical graduates were rated independently. In the final survey there were 166 paired FMG's and USMG's and 130 individual FMG's who were rated by 271 supervisors. The areas of evaluation included: (1) performance of general hospital duties; (2) ability to take a history; (3) ability to conduct a physicial examination; (4) knowledge of the basic medical sciences; (5) relationship with staff, patients, and peers; (6) need of supervision; and (7) ability to learn rapidly. Both in a composite form and on an individual basis, foreign medical graduates were rated as having a level of professional competence and knowledge significantly below that of their American counterparts. It was concluded: "Foreign medical graduates have been admitted to swiftpaced activities for which they are ill-prepared on the assumption that somehow they will fit in and catch up with their colleagues. This optimistic assumption appears to be false, supporting the widespread belief that neither a good apprenticeship nor good clinical hospital training is a satisfactory substitute for a sound undergraduate education."[45] Although the study was not directly designed to measure the quality of patient care provided by foreign medical graduates, Margulies remarked that thousands of foreign trained physicians were not providing medical care of the same quality as that required from graduates of medical schools in the United States. In light of this, it was argued that serious consideration should be given to limiting the patient care responsibilities of foreign trained physicians to those who have clearly demonstrated competence.

This theme of the fitness of foreign medical graduates to participate directly in the health care system is present in two other studies concerning the foreign trained physician situation, on which Margulies has participated: a book with Lucille Bloch, *Foreign Medical Graduates in the United States* (1969)[46] and the report of the Panel on Foreign Medical Graduates for the National Advisory Commission on Health Manpower (1967).[47]

43. "Medical License Statistics 1969," *Journal of the American Medical Association, 212* (1970), 1944-47.

44. Harold Margulies, Lucille S. Bloch, and Francis K. Cholko, "Random Survey of U.S. Hospitals with Approved Internships and Residencies: A Study of the Professional Qualities of Foreign Medical Graduates," *Journal of Medical Education, 43* (1968), 706.

45. *Ibid.*, 714.

46. Harold Margulies and Lucille S. Bloch, *Foreign Medical Graduates in the United States* (Cambridge, Massachusetts, Harvard University Press, 1969).

47. National Advisory Commission on Health Manpower, "Report of the Panel on Foreign Medical Graduates," *Report of the National Advisory Commission on Health Manpower* (2 vols. Washington, D.C., 1967).

Both imply that while there exists a brain drain which is having serious, negative effects throughout the world, particularly in the developing countries, foreign medical graduates are significantly reducing the quality of medical care in the United States. Both stress that there is sufficient evidence to question the ability of foreign trained physicians to provide health care on a par with their American educated counterparts. This being the case, both studies go on to make various recommendations as to how the present method of training foreign graduates might be modified in order more nearly to meet their needs and to protect the high level of patient care in this country. For example, the Panel recommended not only that ECFMG passing scores be raised or Part II of the National Board examination substituted, but also that the mechanism for approving internship and residency programs which foreign medical graduates enter should be made stricter and more demanding, to insure the initial and continuing quality of their education. The Panel also suggested that in hospitals which do not have approved educational programs, foreign trained physicians should only be used if they hold a full and unrestricted state license.

The temptation to treat all foreign medical graduates as a monolithic group is difficult to avoid. There are, however, some interesting attempts to identify subpopulations among foreign graduates and thus to provide a new basis for the discussion of the quality of care provided by foreign physicians. A study by Roland Knobel of Georgia State University set out to determine whether foreign medical graduates serving as residents in United States hospitals could be broken into subpopulations and differentiated on the basis of professional competence and, if so, whether it would be possible to determine the distribution of this population among teaching hospitals and medical specialties.[48] Knobel hypothesized that foreign medical graduates from developed countries (FMGD) are placed primarily in residencies at major affiliated hospitals in specialties that require considerable medical resource support. On the other hand, foreign medical graduates from developing countries (FMGU) were thought to fill a high percentage of residencies in nonaffiliated hospitals, in the low support medical specialties. It was further hypothesized that the variable distribution of foreign medical graduates throughout the states could be predicted, based on the amount of investment each state made in medical education. The hypotheses were supported. Knobel concluded that there are in fact distinct subgroups in terms of competence which comprise the overall population of foreign trained physicians, and that these serve to create differential placement policies.[49] In short, the graduates from medical schools in developed countries abroad gravitate to the most desirable training positions in the United States, while the graduates from schools in less developed countries tend to be "out in the sticks."

48. Roland J. Knobel, Jr., *A Study of the Variable Distribution of Foreign Medical Graduate Residents in U.S. Teaching Hospitals* (unpublished PhD dissertation, Ann Arbor, University of Michigan, 1970).

49. In addition, it was found that the percentage of residencies offered to foreign medical graduates by affiliated hospitals in each state is an indicator of the state's investment in medical education, and an efficient predictor of the percentage of residents who will be foreign trained, as well as the FMGD/FMGU mix.

50. See R. Lawson, "The Role of the University in Graduate Medical Education. 2. Pediatric Training Programs," *Journal of Medical Education, 44* (1969), 874-77.

51. See "The Foreign Medical Graduate," *Journal of the Louisiana Medical Society, 121* (1969), 388-90.

52. See M. Thomson, "The Problem of FMG's Who Wish to Practice in the United States," S. C. Varma, "An FMG Examines the American Board of Psychiatry and Neurology," *American Journal of Psychiatry, 126* (1970), 1509-10; A. Baltazak, "Some Further Comments by FMG's on the ABPN," *American Journal of Psychiatry, 126* (1970), 1678-79; L. Maguigad and L. Kolbb, "The FMG Controversy Continues," M. Thomson, "An Alternative," *American Journal of Psychiatry, 127* (1970), 391-92.

53. The seven published articles deriving from the series are listed in the bibliography.

Since this is not of itself an i[illegible]tion of comparative competence, Knobel is at present eng[illegible]d in reviewing the records of foreign medical graduates to determine the relationship between their primary and graduate medical education and their performance on state licensure and specialty board examinations.

Indications are, however, th[illegible]. foreign medical graduates continue to perform less well than their American counterparts even after several years of American graduate training -- a factor which may be a secondary effect of differential placement policies. The results of state licensing examinations have been remarked upon. Taking all candidates examined for licensure in the United States in 1970, as many as 37 percent of graduates of foreign medical schools failed, compared with 14 percent of Canadians, and only 9 percent and 1 percent, respectively, of the graduates of American medical and osteopathic schools (Appendix Table C7). Moreover, the variation generally holds in each state, although the different requirements for foreign graduates by each board mean that the foreign trained physicians are not a directly comparable group in each state. Indeed, in Arizona, Maine, and Massachusetts in 1970 foreign medical graduates had a better examining record than Americans (Appendix Table C10).

Performance on specialty board examinations from pediatrics[50] to surgery [51] suggests a much poorer record by foreign than American graduates. How far this is the result of the differential placement of the graduates in American hospitals, how far it may be attributed to a language gap, and how far to other factors is impossible to assess, given current knowledge. Some of these questions, however, were raised in a recent lively series of correspondence over the training of psychiatrists in the *American Journal of Psychiatry*.[52] Writers complained that there was a systematic bias against foreign physicians, manifesting itself through a filter system which excludes the foreign physicians from university hospitals but welcomes them into state institutions.

The current lack of specific information concerning competence and its relationship to particular variables results in the large factor of surmise which at present dominates the debate over the relative performance of the foreign trained physician in the hospital (or, for that matter, out in practice). A series of studies by Halberstam, Dacso, Antler, Rusk, and their colleagues in the Department of Rehabilitation Medicine, New York University Medical Center, in the late 1960's, stands out as an attempt to ascertain the experiences of the foreign medical graduate as seen through his perceptions and evaluations, and to acquire a more complete picture of him through knowledge and analysis of his personality structure, attitudes, motivations, and sociocultural and educational background.[53] The subjects of the

study were a group of 320 residents in university affiliated hospitals, 170 of whom were foreign trained and 150 of whom were trained in the United States and included for the purpose of comparison. Both groups were subdivided into internal medicine, physical medicine, and rehabilitation (PM & R), and surgery.[54]

It was found that even in the university setting supervisors tended to rate foreign graduates, in terms of professional ability, lower than United States graduates. Superior ratings were given to 60 percent of the USMG's and 30 percent of the FMG's; in contrast, approximately 30 percent of the FMG's – but only 16 percent of the USMG's – fell into the average, fair, or poor categories. In addition, 50 percent of the FMG's rated United States physicians as superior to foreign graduates in terms of quality of work.[55]

Throughout the study, the surgical residents appeared to be an exception to the various generalizations about foreign medical graduates. An article in the *Annals of Surgery* by Halberstam, Rusk, and Taylor took a closer look at this phenomenon.[56] In contrast to their counterparts in internal medicine and physical medicine and rehabilitation, the foreign trained surgical residents were rated by their supervisors as approximately equal to United States graduates in terms of overall performance. Furthermore, while the foreign trained residents in internal medicine and PM & R scored less favorably on the personality scales than did American graduates in these specialties, this was not true for the FMG's in surgery. The foreign graduates in surgery appeared to resemble their American colleagues more closely in terms of background, personality, and acceptance by the profession than was the case for FMG's in internal medicine and PM & R. Another point of significance was the fact that there appeared to be no differences between foreign and United States trained surgical residents in terms of their satisfaction with their training. This again was in contrast to foreign medical graduates in internal medicine and PM & R, who expressed a significantly higher degree of dissatisfaction with aspects of their training in comparison to their American counterparts. This is more interesting still in light of the fact that foreign medical graduates in surgical residencies worked more hours per week and received the lowest salary among the three groups of FMG's.

Derbyshire, in his book on licensure, quotes with some mirth the possibly apocryphal comment that physicians do not need to speak English to do surgery.[57] The statement, however, may contain at least a grain of truth. Halberstam and colleagues hypothesize that of the three specialties they studied surgery is the one where it is most likely that residency training rather than medical school education is the significant factor; and it may also be true that surgery is more easily adaptable across cultural boundaries as it is less dependent upon the "doctor-patient" relationship and an ability to speak English with facility than (for example) internal medicine, and certainly psychiatry.

54. The six groups were roughly equated for year of residency and the foreign medical graduates for length of time in this country. They were located in 70 hospitals affiliated with 31 medical schools in 22 states, mainly in the northeast. Selection was made randomly from lists provided by the hospitals. Each subject was interviewed individually. In addition, each resident's supervisor was asked to evaluate his performance with regard to knowledge of basic medical sciences and clinical medicine, knowledge of English, personality characteristics, and overall performance. An individual's score on either the ECFMG examination or Part II of the National Board was also obtained.

55. Jacob L. Halberstam and Michael M. Dacso, "Foreign and United States Residents in University-Affiliated Teaching Hospitals: An Investigation of United States Graduate Medical Education," *Bulletin of the New York Academy of Medicine, 42* (1966), 195.

56. Jacob L. Halberstam, Howard A. Rusk, and Eugene J. Taylor, "Foreign Surgical Residents in University-Affiliated Hospitals: A Unique Case in United States Graduate Medical Education," *Annals of Surgery, 171* (1970), 485-500.

57. Derbyshire, *Medical Licensure*, 147.

58. Jacob L. Halberstam, Lawrence Antler, and Howard A. Rush, "Foreign Interns in Community Hospitals," *Journal of Medical Education, 46*, (1971), 504-17.

59. Alms C. McGuinness, "ECFMG Examinations, United States Citizen Candidate Performance," *Journal of the American Medical Association, 214* (1970), 1685.

Clearly, far more study needs to be done of inter-specialty differences, both in relation to specialties as a whole (e.g., the personality characteristics of surgeons and psychiatrists, and how far these hold for selected groups of foreign trained physicians as well as for Americans), and in relation to the experience of foreign trained physicians in different specialties. Halberstam and his colleagues note that by simply coming to the United States for training, foreign physicians are implicitly recognizing the superiority of American medicine, a recognition that is made explicit in their ranking United States physicians as superior to foreign ones. This alone puts them in a second rate position and undoubtedly contributes somewhat to their poorer level of performance. Over and above this is the differential placement of foreign physicians. The present situation appears to be one of self-fulfilling prophecy. Providing FMG's with unrealistic training opportunities tends to reinforce any inadequacies in earlier training and – at least for many of them – to ensure dissatisfaction with and poor performance in training.

The data accumulated in the few studies available so far point up the problem of making any generalizations on the basis of present knowledge of foreign medical graduates, whether related to questions of specialty, the type of hospital where they are training, or to other psychological and cultural factors. To obtain further, more precise information on foreign trained physicians, the Halberstam, Dacso group has attempted a similar study of residents in nonaffiliated hospitals. Unfortunately, the amount of cooperation they have received from these hospitals has been minimal, with the total refusal rate approaching 25 percent. Nevertheless, the group has made some important observations on the basis of a sample of 200 foreign born foreign medical graduates in internship positions. It would seem that foreign graduates accept internships in nonaffiliated hospitals because they fail to secure them in affiliated ones. Further, only 14 percent of the interns interviewed felt that their program met their expectations, while another 32 percent were neutral; 27 percent maintained that they received minimal if any supervision.[58] What effect these attitudes have on their actual performance is at present only a matter for speculation.

Another interesting development, relating primarily to language, cultural, and basic educational factors, is the existence of a ready-made control group in the form of American graduates of foreign medical schools. McGuinness has documented the ECFMG results of U.S. citizens and foreign citizens attending schools in selected countries.[59] The results are difficult to interpret, since the language barrier works both ways; the Americans have usually undertaken their medical education in a foreign language, and the foreigners are being tested in a foreign language. Of 1,165 U.S. citizens in medical schools in ten (largely western European) countries, 29.9 percent passed the ECFMG examination; this compared with 42.0 percent of the non-U.S.

citizens taking the examination from the same schools. The balance varied, however, from country to country. What the subsequent adjustments of the two groups will be to graduate education in the United States suggests a follow-up investigation.

In summary, hard data about the actual performance and role of the foreign physician in different educational and specialty milieus are marked chiefly by their absence. There are two urgent and concurrent needs. One is for a coordinated and integrated examining and testing procedure in U.S. medicine. The second is for immediate sponsorship of research and demonstrations in relation to specific national groups, hospital affiliations, specialties, and language factors.

For individual foreign medical graduates the present situation is one of confusion, largely because of the individual variations among the requirements of different states. Those foreign graduates who seek eventual licensure in the United States face three types of examinations. First, virtually all foreign trained physicians must pass the ECFMG examination, either because it is required by a state examining board, or because the board requires the completion of a period of approved graduate medical education in the United States, which requires the ECFMG.[60]

They must also take the licensing examination of the state in which they will be licensed. If they wish to be licensed in more than one state, or to move, however, they must usually (unlike most American graduates) take a further state licensing examination. The FLEX examination provides a fruitful possibility in this respect. In the meanwhile, foreign graduates lack the same rights and privileges as American graduates, even when they have completed the same American graduate medical education and passed the same licensing examination.

60. See William A. Sodeman, "The FMG and Licensure," *Journal of the American Medical Association, 216* (1971), 1854.

3

The United States is the biggest recipient of foreign medical talent, although not the only one, in the world. In the 10 years ending June 1971, almost 76,000 physicians entered the United States as immigrants or exchange visitors. Indeed, in fiscal 1971, more physicians entered the United States from abroad than were graduated from all American medical schools (Appendix Table A2).

Besides the sheer number of physicians entering this country — over 10,000 in 1971 — the United States is distinguished from other advanced industrial nations by also retaining its native talent. In Britain, for example, the inflow of physicians from the Commonwealth countries and Ireland is counterbalanced by an outflow of local physicians. The United States acts almost entirely as an importing nation, with few American trained physicians leaving this country for practice abroad.

The United States government has not publicly sought to lure foreign physicians to this country. The pulls have resulted from the excellence of medical training and the myriad of appealing professional opportunities to be had here. In addition, there are undoubtedly various "push factors," noted by Gish and others, which encourage physicians to leave their own countries for practice elsewhere.[1] At the same time, the United States has not taken any strong measures to curtail physician immigration, either generally or from specific regions, or to consider the pressing needs of the Third World. Korea, where large sections of the country have no modern medical services available, has about 13,000 doctors to cover its entire population; there are already 2,000 Korean medical graduates in the United States, and more pour in each year. Thailand, with 4,000 doctors, has produced 1,000 medical graduates who are now in this country. Yet, outside Bangkok, physician services are woefully inadequate.

1. See Oscar Gish, "Medical Education and Medical Migration," *Proceedings of the Royal Society, 63* (1970), 1191-95; "Medical Education and the Brain Drain," *British Journal of Medical Education, 3* (1969), 11-14.

2. Figures from Appendix Table A12, and *World Health Statistics Annual, 1968, Vol. III*, Health Personnel and Hospital Establishments, World Health Organization, Geneva, 1971, Table 1; Oscar Gish, *Doctor Migration and World Health; The Impact of the International Demand for Doctors on Health Services in Developing Countries*. Occasional Papers on Social Administration No. 43. (London, Bell 1971), 94-96.

3. At the end of 1970, there were 518 Iranian graduates of 1960-64 in the United States, together with 541 of the classes of 1965-69. J.N. Haug, B.C. Martin, *Foreign Medical Graduates in the United States, 1970*, 181.

4. "Medical Licensure Statistics, 1970," *Journal of the American Medical Association, 216* (1971), 1848.

There are more Thai graduates in New York than there are serving Thailand's rural population of 28 million.[2] Iran produces 600 medical graduates a year; on average, there are at least 100 of each of the graduating classes from 1960 through 1969 now in the United States.[3] Many, if not most, will stay; in 1970 alone, 806 Iranian medical graduates sat for American licensing examinations.[4] Similar statements can be made for many, if not most, Third World countries.

Physicians enter the United States primarily as immigrants (5,756 physicians in fiscal 1971) or as so-called "exchange visitors" (4,784). The official intention of these two categories differs, the former presumably including those intending to stay in the United States, the latter those coming for a temporary period of education or general interest. But the lines are not clear; nor, indeed, are present governmental policies toward physician immigration fully articulated.

The present situation is the product of a series of decisions by the Congress, the State Department, and the Immigration and Naturalization Service since World War II. Without relatively permissive visa arrangements, there would not have been the mushrooming in numbers of physicians entering the United States. How these arrangements developed, and what they are now, are thus of immediate and long term interest.

Formalizing International Exchange

Far-reaching policies can develop in strange ways. The United States entered into a program of worldwide educational exchange (which was to prove a major vehicle for the migration of physicians) through the need to dispose of excess goods and supplies left in foreign countries after World War II. The enactment in 1946 of Senator J. William Fulbright's amendment to the Surplus Property Act of 1944 designated the State Department as the disposal agency for all surplus property outside the continental United States, its territories and possessions. The revenue to be received from the sale of this property took the form of a credit in a foreign country and could not be converted into U.S. currency; it was thus necessary to utilize it abroad. The decision was to use the money for the then relatively noncontroversial purpose of international education. The Secretary of State was authorized to establish a program of international educational exchange by: (1) financing studies, research, library operation, and other educational activities of (or for) American citizens in schools and institutions of higher education in foreign countries; (2) financing similar activities for citizens of foreign countries in American schools and institutions of higher learning located outside the United States and territories (for example, the American University in Beirut), including payment for transportation, tuition, maintenance, and

other expenses incidental to scholastic activity; and (3) furnishing transportation for citizens of foreign countries who wished to attend American schools and institutions of higher education located within the United States.[5]

Senator Fulbright, whose interest in the bill was primarily educational, had solicited and received support for the program from leading educators in the United States. It was their view, as well as his, that the legislation should not attempt to establish any criteria for the selection of applicants, as this would only make the program inflexible and ultimately unworkable. Selection was to be in the hands of private organizations, such as the Institute of International Education,[6] which were already active in this field. The door was thus open to a relatively permissive exchange program, with primary decisions decentralized to private groups – a pattern which was to be followed later in the recruitment of doctors to American hospitals.

The early Fulbright program was rather one-sided, limited as it was to expenses incurred in specified foreign jurisdictions. But it did at least provide a framework for Americans to study in foreign countries in the immediate post-war years, and an endorsement of the idea of international exchange in education.

The program covered all academic fields, including medicine. Little federal money was given, however, for Americans to study medicine. In 1954-55, when the Institute of International Education published its first survey of American students abroad and foreign students in U.S. schools, in a continuing series called *Open Doors*, there were 1,730 Americans studying medicine in medical schools abroad, only a handful of whom had received aid under the Fulbright Amendment. As before, and since, most Americans studying medicine abroad did so of their own accord, through their own means. In comparison, 619 foreign nationals were enrolled as undergraduate medical students in American medical schools. Thus, at the undergraduate (MD) level, far more Americans were abroad than foreign nationals were in American schools, a pattern which has continued; the current ratio is three to one (Appendix Table A11).

From a political point of view, the early Fulbright program was particularly desirable, as it did not entail Congressional appropriations. Furthermore, it enabled the United States to make immediate use of foreign credits which might otherwise be lost through confiscation or devaluation. These arguments, rather than strictly cultural ones, were persuasive. Already, too, the specter of the Cold War was raising its head. Advocates of the bill were quick to point out that, in a time of increasing tension and rivalry between the United States and the Soviet Union, the proposal would use foreign currencies and credits for purposes for which, if it were not enacted, Congress might well be asked

5. Foreign Educational Benefits and Surplus Property. Hearings Before a Subcommittee of the Committee on Military Affairs on S. 1440 and S. 1636. United States Senate, 79th Cong., 2nd Sess., February 25, 1946, 1-2.

6. The Institute of International Education is a private, nonprofit agency, founded in 1919, involved in educational and cultural exchange. Its activities include the selection of American candidates for U.S. government grants authorized under the Fulbright-Hays Act of 1961 (previously authorized under the Fulbright Amendment and the Smith-Mundt Act) and for scholarships offered by foreign governments and universities. In addition, it arranges for the admission of foreign students to educational institutions in the United States on programs sponsored by corporations, foundations, and some governmental agencies. It further provides liaison between sponsor and student. The IIE does not help foreign medical graduates to obtain internship and residency positions, although it provides them with information on the procedure for seeking such appointments.

7. Foreign Educational Benefits and Surplus Property. Report of the Committee on Military Affairs to Accompany S. 1636, March 12, 1946, 5.

8. See Rosemary Stevens, *American Medicine and the Public Interest*, 348-57 and passim.

9. Public Law 80-402, January 27, 1948.

to appropriate funds in the future in the interest of American foreign policy.[7] Even in purely domestic terms, the bill had everything to commend it. American universities in 1946 were crowded with GI's whose education had been interrupted or postponed by the war, and to whom the government had given an entitlement to higher education through the GI bill. Thus, any effort to facilitate the flow of students abroad would help to alleviate some of the pressure on American universities. This factor was of particular interest to medical educators since, in the name of quality, the schools were resisting pressures to expand their class sizes or reduce the length of curriculum in the immediate post-war years.[8]

The concept of educational exchange, initiated by the Fulbright program, took on added political importance as the Cold War gained momentum. With the avowed intention "To promote the better understanding of the United States among the peoples of the world and to strengthen cooperative international relations," the United States Information and Education Exchange (Smith-Mundt) Act of 1948 broadened the base of the exchange program, and authorized the appropriation of federal funds to be used jointly with available foreign currencies.[9] This enabled the United States Government to develop a genuine two-way exchange, opening up American universities to foreign students in the same way that the Fulbright Amendment had for American students in foreign universities.

To facilitate this process, the Smith-Mundt Act authorized a special visa category, that of exchange visitor or J visa. Under the terms of the Act, still in force today, students are admitted to the United States as nonimmigrant visitors and allowed to stay until the termination of their studies. During this time, they are required to be involved in a full-time study program and to report to the Immigration and Naturalization Service every 90 days. Those admitted under this provision who fail to maintain the status under which they were admitted, or who fail to depart from the United States at the end of their studies, or who engage in activities detrimental to the security of the United States, are technically subject to immediate deportation.

Because of the limitation on places for medical students in the United States, the Exchange Visitor Program was to have a relatively small impact on the number of foreign students in U.S. medical schools; there were 1,134 such students in 1970 (see Appendix Table A11). But it was to be a significant and lasting vehicle for the entry of physicians into the numerically elastic graduate educational programs offered as hospital internships and residencies. In the 10 years ending June 1971, almost 47,000 physicians entered this country on exchange visitor visas, the great majority for graduate medical education (Appendix Table A2).

The intensifying conflict between the United States and the Soviet Union, and the resultant Cold War, were major ingredients in the successful passage of the Smith-Mundt Act. Representative John D. Lodge of Connecticut, speaking on behalf of the bill at a subcommittee hearing of the Senate Foreign Relations Committee, remarked: "This program can become a psychological warfare agency in terms of peacetime conflicts, rather than just for war or for normal peacetime ends."[10] There was a general assumption that peace could endure only in a climate of mutual understanding and friendly contacts, and that encouraging foreign students to come to this country would aid in that process. Thus the bill came to be viewed as a necessary part of the national security program. Summing up the attitudes of its supporters, Representative Karl E. Mundt of South Dakota, co-sponsor of the bill stated:

> If for no other reason than just good American business judgment, it seems to me that we should be willing to spend the comparatively niggardly sum of 20 to 30 million dollars . . . in insuring the fact that at least the billion dollar sums we are spending and loaning overseas are not turned against us by vicious propaganda and cruel misunderstandings arising from the facts (sic) we are unable to tell the truth about ourselves abroad . . . the Russians and others are spreading malicious falsehoods about us every day, by radio, newspapers, by propaganda, and unless we can refute them, the constant dripping of lies on even the granite of truth will wear away the truth about America.[11]

This emphasis on the political, propaganda, and security aspects of the exchange program obscured considerations in the Congress of the impact that such a program would have on both education and immigration. The fact that it was placed in the Department of State rather than the Office of Education points this up. No attempt was made to develop any overall guidelines or policy as to the United States' role in international education. As a result, the Act failed to set up any type of procedure by which the competence of persons wishing to come to the United States to pursue their studies could be judged and on which selection could be made. It was felt, following the precedent established in the Fulbright Amendment, that this function could be left to the existing agencies and associations previously involved in bringing foreign students to the United States. While this might not have been as urgent a need with regard to the Fulbright Amendment, which functioned primarily to send Americans abroad, the presence of an unknown number of foreign students seeking entry to the United States posed another set of potential problems. Although rigid standards were undoubtedly not the answer, the total absence of guidelines was an invitation to confusion.

10. United States Information and Educational Exchange Act of 1947. Hearings Before a Subcommittee of the Committee on Foreign Relations on H.R. 3342. United States Senate, 80th Cong., 1st Sess., July 2, 3, 5, 1947, 44.

11. *Ibid.*, 13.

12. *Ibid.*, 61.
13. American Medical Association, *Directory of Approved Internships and Residencies*, 1967, 19.

Complicating matters further, the bill's advocates grossly underestimated the number of students involved. At the time of the hearings on the bill, H.R. 3342, a limited educational exchange program with Latin America had resulted in the offering of scholarships to approximately 350 students from this area to study in the United States. H.R. 3342, it was felt, would add about 500 more students to this total, over all fields.[12] Yet far from the mere 500 additional students who were expected, the number of foreign medical graduates alone who came to the United States as interns and residents in 1950-1951 (the Smith-Mundt Act took effect on July 31, 1949) amounted to almost 2,100 individuals. This was a rise from almost zero in the previous years.[13] Initially, the Smith-Mundt Act placed no time limit on a student's stay. It was clearly intended, however, that these exchange students should return to their native lands upon completion of their studies, if for no other reason than that only upon their return could they influence public opinion on behalf of the United States.

The Smith-Mundt Act was passed on the apparent understanding that the exchange visitor program would be applicable to persons coming to the United States under Government-sponsored programs. But this soon broke down. The exchange visitor rubric became widely used to include individuals on public or private programs which furthered the objectives of the Act, but who were not covered by any other visa category. Interns and residents fell into this definition. According to provisions in the Act, any sponsor of an educational exchange program might apply to the Secretary of State to have it designated an Exchange Visitor Program. In the late 1940's, the Department began to grant this designation to programs sponsored by individuals and private firms which could prove that their primary objectives were to promote the better understanding between the people of the United States and other countries. In making these designations, it was emphasized that the intent of the Exchange Visitor Program was that the participant should come to the United States for training and then return to his homeland to utilize that training. It was not intended to help meet staffing needs; indeed, it was pointed out that program designations would be denied or revoked if it became apparent that this was the sponsor's real aim in seeking such a designation. The line between education and staffing in relation to hospital interns and residents is not always clear, however. Even in the most altruistic institutions, house staff provide an important service function; thus the potential for confusion and possible exploitation was inherent in the designation.

The application of the exchange visitor designation to hospital training programs was essentially a question of decision by default. Through a series of rulings, the Immigration and Naturalization Service (INS) held that a person wishing to come to the United States temporarily as a medical intern or resident

would not be coming to an established institution of learning. He could not, therefore, qualify for an F (student) visa, even if he were coming to a university-affiliated hospital. As a result, only aliens coming as undergraduate medical students were eligible for an F visa. In addition, it was ruled that foreign medical graduates seeking graduate medical education would not be given an H visa, as this applied only to three types of individuals: those of distinguished ability coming to perform a service for which this ability was necessary; those coming to perform a service which was needed and for which the present American labor market could not supply sufficient numbers; and those coming as industrial trainees.[14]

In light of these rulings, the State Department agreed to designate Exchange Visitor Programs for hospitals, as otherwise aliens from countries with over-subscribed immigration quotas would be denied access to American medical training. In making designations within the field of medicine, consideration was to be given to programs approved by a recognized agency in the field.[15] Assistance was also sought from the same agencies in the supervision of these programs. But, as with other professionals brought in under the Exchange Visitor Program, while the State Department took general responsibility for the proper operation of the private programs, selection of the participants remained the responsibility of the sponsor. As a result of these various rulings and procedures, the exchange visitor visa became the common vehicle for American hospitals to import foreign trained house staff, nominally on a disinterested, educational basis. Physicians became a significant factor in the whole exchange program. By 1961, over 2,600 private programs were designated as Exchange Visitor Programs, and about 135 Government ones. Of this number, approximately 1,300 were sponsored by hospitals.[16]

The influx of foreign trained physicians to graduate medical education programs in the United States in the 1950's was not, of course, entirely the result of the new educational exchange program. Without the interest of hospitals in recruiting foreign physicians, the rise in numbers would not have occurred. But as remarked earlier, the visa changes came at a critical time. The number of veterans returning from the Second World War had caused a rapid expansion in the number of approved internship and residency programs between 1946 and 1950, in order to accomodate their applications for specialty training before returning to practice. In this process, both hospitals and physicians benefited from support under the GI bill. At the same time, federal support for hospital construction, authorized under the Hill-Burton Act, resulted in a relatively large number of new hospitals and the expansion of facilities in many others. By

14. For an account of the various arguments, see House hearings on H.R. 5203 and H.R. 5204, 329; Mutual Educational and Cultural Exchange Act of 1961. Report to Accompany H.R. 8666. Committee on Foreign Affairs. House of Representatives. August 31, 1961. 87th Cong., 1st Sess., Report No. 1094, 20-21.

15. Specifically, the Department cited seven such agencies: the American Medical Association, the American Hospital Association, the American Nursing Association, the American Dental Association, the American Dietetic Association of Social Workers, the Council on Medical Education and Hospitals, and the National Association of Social Workers. *Immigration Aspects of the International Educational Exchange Program. Report of Subcommittee No. 1 of the Committee on the Judiciary, House of Representatives, Pursuant to H. Res. 56*, July 17, 1961. 87th Cong., 1st Sess., Report No. 721, 29-30.

16. *Ibid.*, 21-22. Physicians have continued to play a disproportionate role in the Exchange Visitor Program. In fiscal 1971, for example, a total of 17,754 professional, technical, and kindred workers entered the United States on exchange visas. Of these, 5,008 were physicians (another 1,109 were nurses). The figures may be compared against the total number of "professors and instructors" in all fields and categories: a total of 2,129 in fiscal 1970. U.S. Department of Justice, Immigration and Naturalization Service, personal communication.

17. National Advisory Commission on Health Manpower, "Report of the Panel on Foreign Medical Graduates," *Report of the National Advisory Commission on Health Manpower*, Vol. II, November, 1967, 79-80.

1950, however, with the supply of returning veterans slowing to a halt, many hospitals with newly functioning or expanded educational programs found that they had openings going begging. The situation was further complicated by the Korean War, for many young physicians, who would normally have been engaged in graduate training, were on active military duty.

Reluctant to abandon training programs which provided convenient, less expensive manpower for their services than fully trained physicians, hospitals welcomed foreign educated physicians as a new source of house staff. Until 1950, foreign medical graduates entering the United States each year represented less than 5 percent of the nation's total annual increase in medical manpower.[17] After 1950, this contribution began to increase rapidly as some hospitals began deliberate recruitment of foreign trained doctors through recruitment teams and commercial firms, including airlines and travel agencies. The number of foreign medical graduates in graduate educational positions in the United States doubled between 1950 and 1952; doubled again by 1958; and yet again by 1967 (Appendix Table B2). Today more than 16,000 foreign trained physicians are in approved internship and residency positions in the United States, and another 3,000 are undertaking other graduate training. Almost two-thirds of the physicians entering the United States in the last decade have done so on exchange visitor visas (Appendix Tables A2, A3).

In this process, two quite distinct policies favoring the foreign medical graduate have been in operation. On the one hand was the promotion of international education exchange, for humane as well as political, economic, and propaganda purposes; on the other, the recognition of a physician manpower shortage in this country at the very moment when there was also a steadily increasing demand for more and better medical care. The two policies were clearly distinct, but their effects were interrelated. Without the J visa, hospitals would have found it far more difficult than they did in the 1950's (and since) to encourage the influx of foreign trained physicians to accredited graduate educational positions. In turn, in a situation of increased demand, this secondary supply of foreign physicians generated a steady stream of permanent residents to the United States.

This latter factor — the protracted length of stay of some foreign students in the United States — caused one important change in the exchange visitor regulations during the 1950's. In the first few years of the program, the time which exchange visitors could spend in the United States went largely unchecked. But, in 1956, the Smith-Mundt Act was amended (P.L. 84-555) to restrict citizens from a foreign country who were in the United States under the Exchange Visitor Program (with a J visa) from being granted an immigrant visa, an adjustment of their status to that of permanent resident, or a non-immigrant visa, until it had

been shown that they had spent at least two years in another country or countries after leaving the United States.[18] This restriction was to become the cause of considerable controversy through the 1960's and into the 1970's, and appears not infrequently to have been ignored. Another effort to encourage exchange visitors to return home is found in a State Department ruling of 1959 limiting the stay of foreign medical graduates in training as interns and residents to 5 years. Again, though, this does not appear to have been strictly enforced.[19] Basically, the government chose to stay clear of the particular issues raised by foreign physicians throughout the 1950's (as it has since), leaving the medical establishment to take care of its own house, through its regular programs of examination of credentials and accreditation of training programs.

One major professional activity was the establishment of the Educational Council for Foreign Medical Graduates (ECFMG) in 1957, to provide a clearinghouse to certify the basic qualifications of individual foreign trained physicians to enter training. This development was not officially recognized by the Immigration and Naturalization Service, however. Physicians could still enter the country on J visas without holding the minimal criterion of adequacy as defined by the American medical profession. It is doubtful how far the several thousand physicians who came to the United States in the 1950's and 1960's, ostensibly for training, but who could not pass the ECFMG examination and were thus denied an adequate education, fulfilled the original purpose of the Exchange Visitor Program. They can hardly be expected to have returned home bearing the spirit of peace and international understanding. Such implications appear never to have been examined by the politicians.

Educational Exchange: Reappraisal

By 1961, there were two groups of foreign doctors who, under the existing interpretation of the law, had to be classified as exchange visitors for visa purposes, thereby coming under the two year return provision: (1) recipients of State Department study or travel grants, and (2) aliens coming as nonimmigrants to American hospitals for internships and residencies. In numerical terms, the latter category swamped the former. In fiscal 1962 alone, as many as 3,970 physicians entered the United States as exchange visitors; and the number was rising steadily (Appendix Table A2).

The ability to analyze the impact of the exchange programs is hindered by the lack of statistical data and by the diffusion of responsibility for foreign trainees over a variety of government and private agencies; the two are not unconnected. By 1961, almost every agency of the Government was engaged in some type of international exchange. The programs' authority to operate was by then contained in a half dozen or so pieces of

18. The magnitude of the number of individuals who would come under this requirement was suggested by an AMA survey on the visa status of foreign medical graduates in training positions in the United States from June 1 through July 31, 1962. A total of 67 percent of all FMG's in internship and residency positions at this time were on J visas. Only 25 percent were here as permanent residents; another 2 percent were displaced persons, and the remaining 6 percent had various other visa arrangements. In absolute numbers, J visa holders accounted for 5,708 physicians out of the 9,776 FMG's who were currently in training in the United States. "Graduate Medical Education in the United States," *Journal of the American Medical Association, 186* (1963), 681.

19. Between 1958 and 1963, a total of 3,636 waivers were granted to foreign medical graduates on exchange visitor visas to enable them to remain in the United States. See Gregory Henderson, "Foreign Students: Exchange or Immigration?" in *International Education: Past, Present, Problems and Prospects*, Selected Readings to Supplement H.R. 14643, Committee on Education and Labor, House of Representatives, 1966, 351.

legislation, largely created through separate initiative and passed without much consideration of each other. By 1961, it had become apparent that if these international exchange activities were to function in any meaningful way with regard to American foreign policy, there should be some consistency of approach, and some unity and clarity in administrative responsibilty.

Encouraged by the emphasis which both presidential candidates placed on international exchange during the 1960 election, Senator Fulbright introduced a bill designed to act as an umbrella bringing all the existing laws dealing primarily with the educational and cultural aspects of the exchange programs under one operating agency, directly under the supervision of the President or his nominee.[20] Specifically, the programs authorized by the Fulbright Amendment to the Surplus Property Act of 1944, the U.S. Information and Educational Exchange (Smith-Mundt) Act of 1948, the International Cultural Exchange and Trade Fair Participation Act of 1956, the Finnish Debt Payments Act of 1949, and the Agricultural Trade Development and Assistance Act of 1954, were all to be brought under the auspices of the State Department. The measure would not, however, have included exchange programs operating under the jurisdiction of the Department of Health, Education, and Welfare[21] or the Atomic Energy Commission. By consolidating the various provisions of the existing laws, it was hoped that the new bill would alleviate, if not entirely overcome, that dissipation of authority which had resulted from the failure to develop a coherent overall plan and rationale for international educational and cultural programs.[22] In addition, an effort was made to create more flexibility in administration, chiefly by means of long term financing, to enable planning to be carried out on something other than a year-to-year basis.

In contrast to the hearings on earlier legislation, fairly comprehensive attention was paid to the effect which the proposed legislation could be expected to have both on education and on immigration. More significantly, the highly individual, far-reaching problem of foreign trained physicians was finally recognized and received specific consideration. The bill, as it was originally drafted, sought to make only one change in the existing immigration laws – to create an exemption for physicians and nurses from the two year foreign residence requirement, necessary under Public Law 84-555, for all persons entering the United States with a J visa and later wishing to change their status to that of an immigrant or permanent resident.[23] This was to be done by creating an additional category of nonimmigrants, thus allowing more choice between visa categories so that foreign medical personnel not covered by a U.S. Government program would not be compelled to enter as exchange visitors and thus be subject to the retu n provision.

20. Hearings Before the Committee on Foreign Relations, United States Senate, 87th Cong., 1st Sess., on S. 1154: A Bill to Provide for the Improvement and Strengthening of the International Relations of the United States by Promoting Better Mutual Understanding Among the Peoples of the World Through Educational and Cultural Exchanges. March 29 and April 27, 1961, 18-19. See also Hearings Before the Subcommittee on State Department Organization and Foreign Operations of the Committee on Foreign Affairs, House of Representatives, 87th Cong., 1st Sess., on H.R. 5203 and H.R. 5204: Providing for the Improvement and Strengthening of the International Relations of the United States by Promoting Better Mutual Understanding Among the Peoples of the World Through Educational and Cultural Exchanges. May 25, and June 1, 22, 6, and 9, 1961, 1.

21. HEW sponsors educational enchange programs in the health fields primarily under the auspices of the National Institutes of Health. This largely involves individuals, both physicians and non-physicians, who are engaged in bio-medical research. Physicians who come to the United States as interns and residents are brought under the jurisdiction of the State Department as a result of the INS ruling on their eligibility for a J visa. They come under the province of HEW only if they seek a waiver in the two years residence abroad provision. Physicians seeking entry to the United States for reasons other than further training are for the most part under the policy decisions of the Labor Department.

22. Mutual Educational and Cultural Exchange Act of 1961. Report of the Committee on Foreign Relations, United States Senate, on S. 1154, June 14, 1961, 87th Cong., 1st Sess., Report No. 372, 2.

23. See Sec. 109 (b) of the original draft of the bill, found in Senate heaarings on S. 1154, 6 and passim.

As the law then stood, there was only one respite from the two year departure requirement. An interested Government agency might request the Secretary of State to recommend a waiver in the case of an exchange visitor whose admission to the United States was found to be in the public interest, or whose absence would constitute an undue personal hardship. If such a recommendation was forthcoming, the Attorney General was authorized to grant the request. An indication of how prevalent such requests were from physicians can be seen in State Department figures for June 1956 to December 31, 1960. During this time the Department received 2,674 formal waiver applications; of these, waivers were recommended for about 70 percent of the applicants, 1,812 on the grounds that the applicant had married an American citizen, and 292 on the basis that the service of the applicant was needed by another Federal agency. As many as 44 percent of these successful waiver applications were granted to physicians and another 15 percent to nurses and student nurses.[24]

The question of waivers was – and remains – a sticky one. Educational exchange by its very nature presupposes temporary visits by students to foreign countries followed by the students' return, enriched by experience, and having in turn added their own contribution to the host country. The exchange visitor visa formalized this procedure by making it difficult, but not impossible, for students to turn themselves into permanent residents. The new proposals drawn up by Senator Fulbright and his staff would have allowed physicians and nurses to circumvent existing immigration requirements. This would have two far-reaching implications: the one touching on the very purpose of educational and cultural exchange as a part of the broader aspects of foreign policy; the second, raising more serious issues of immigration.

As was previously indicated, the original draft of this legislation had not been drawn up by the Kennedy Administration, but by Senator Fulbright and his staff. While approving of most of its provisions, the Administration sought the removal of this special exemption for medical personnel. Abraham Ribicoff, then Secretary of Health, Education, and Welfare, in a letter to Senator Fulbright stated:

> We do not believe that the national interest would be served by placing alien foreign trained physicians and nurses in a special immigration category designed to facilitate their remaining in this country . . . the need for adequately trained physicians in most countries of the world is substantially greater than in the United States. It seems probable that many of those countries would be reluctant to allow their physicians to receive badly needed additional training in this country, were we to adopt a policy of encouraging these physicians to make their permanent home here.[25]

24. House hearings on H.R. 5203 and H.R. 5204, 16.

25. Senate hearings on S. 1154, 109.

26. *Ibid.*, 226.

27. Report on H.R. 8666, No. 1094, 16.

28. Data are not available for the country of citizenship of exchange visitors compared with the last country of residence. An indication of the problem can be given in the figures for physicians coming to the United States as immigrants or changing to immigrant status. Well over one-fourth of the 3,325 physician immigrants in fiscal 1967 came from countries of last permanent residence (i.e., residence of at least one year) which were different from their country of birth. Part of this phenomenon may be ascribed to external political factors; e.g., individuals born in Poland, Rumania, or Cuba may have emigrated for reasons unconnected with their medical careers. In other cases, the connections are not so clear; e.g., 85 of the 199 immigrant physicians born in India came from a different country of residence. National Science Foundation, *Scientists, Engineers and Physicians from Abroad, Fiscal Years 1966 and 1967*, 19, Table 6. See also Irene Butter, "The Migratory Flow of Doctors To and From the United States," *Medical Care*, 9 (1971), 17-31.

A similar view was taken by the American Hospital Association (AHA), on the grounds that any special exemption would undermine the education of foreign medical graduates, who would be increasingly used as cheap labor. The AHA also argued that bad feelings would develop toward the United States if it sought to recruit physicians from areas where the need for them was greater than in this country, and that existing programs to educate health personnel so that they might return home to improve health care there would be nullified.[26]

In the final version of the bill, which became law on September 21, 1961 (P.L. 87-256), the special visa category for medical personnel was dropped and the departure provision of Public Law 84-555 was kept intact. Interns and residents coming to the United States on exchange visitor visas were still normally subject to the two year period of absence from this country before returning for permanent residence. One potentially important change was made, however, in the requirement of a finding by the Secretary of State to determine whether the two years residence abroad of an exchange alien, if not occurring in the country from which he had come to the United States, was in accord with the basic objectives of the exchange program (the answer would seem self-evident). The purpose of this modification was to avoid situations where an exchange alien preferred to spend the requisite two years abroad in a country well supplied with the skills he had developed in the United States -- notably Canada, where many foreign physicians fled before returning to the United States.[27] Some discussion was held on the possibility of increasing the duration of the absence if the individual did not reside in an area where his services were in demand. This question, though, raised thorny problems (now being raised again) as to which agency was going to define the world's needy areas in terms of physicians for the purpose of subsequent immigration, and thus was dropped.

The whole subject of the two year return provision was fraught with such difficulties -- in large part a reflection of a growing international phenomenon of peripatetic doctors. A physician might be born in one country, go to medical school in another, have graduate education in the United States, and then go on to yet another country for work or further training. From the immigration point of view, the test of which country an exchange visitor is exchanging from is thus not always clear. Is it the country of birth, the country of citizenship, or the country of last permanent residence?[28] It is surprising neither that the exchange visitor regulations have been hard to enforce nor that waivers for physicians have tended to be looked on with sympathy.

As has been indicated, the large majority of requests for waivers of the two year absence provision of Public Law 84-555, based on the grounds of need, involved the medical professions.

This fact was noted with some concern in a report by a special subcommittee of the House Judiciary Committee in July 1961 (still the fullest published analysis of the exchange program), in relation to how far the exchange visitor provisions were being used to circumvent the immigration laws.[29] The Department of Health, Education, and Welfare, to which many of these requests were directed, followed a policy of requesting waivers only in instances when such a request was "clearly consistent with the maintenance of the integrity of the educational exchange program," on the basis of three specific criteria. First, an activity of national or international significance must be involved: "Accordingly, waivers will not be requested when the documentation clearly demonstrates that the problem is solely one of recruitment in order to overcome a local community or institution manpower shortage." Second, there must be a direct relationship between the participant and the program, so that his departure would result in the termination of the program. Finally, the individual "must possess unique and outstanding qualifications, training and experience and be making original and significant contributions to the program."[30] Taking a similar view, State Department policy in cases where staffing needs were a primary reason for requesting the waiver was to turn down the request. In private, the Department held the view, in the early 1960's, that provision for the training of medical personnel should not come under the Exchange Visitor Program at all. Indeed, active consideration was being given to canceling the exchange visitor designation for all training hospitals not connected with an approved educational institution, and there was continuing concern over the use of the visa as an "avenue of immigration."[31]

As far as limitations on the stay of an exchange visitor were concerned, the State Department tried to be rather flexible. The 1961 report noted that an extension was normally recommended where it appeared that: (1) the extension was consistent with the participant's training objectives; (2) the sponsor indicated that an extension would enhance the participant's usefulness in his homeland; (3) the extension would not result in overspecialization by the individual to the extent that he would be unable to find a position abroad; (4) there was no indication that the participant's government would object to the proposed extension; and (5) the proposed extension would not result in the loss of rapport with the people at home or in a loss of interest in returning home. The Department's official policy was to balance the additional training against the person's educational objectives and to determine whether this additional training would be useful to him at home.[32] Once the exchange visitor had arrived, therefore, he had a good chance of staying for an extended visit.

29. Judiciary Committee Rept. No. 721, 32 and passim.
30. *Ibid.*, 14.
31. *Ibid.*, 29, 35, 45.
32. *Ibid.*, 30.

The 1961 hearings are marked by concern over the effects of this flexibility. It was becoming apparent that there was a growing army of foreign physicians who wished to remain in the United States. No matter what the stated purposes of the exchange program, its goals, appeared to be overwhelmed in the happy exploitation of their talents by at least some staff-hungry hospitals. Just how limited the Government's efforts were in guarding against this exploitation was revealed during a hearing that took place before a Subcommittee of the House Judiciary Committee.

> Mr. Besterman: . . . But if the position of the exchange-visitor who is an intern in a hospital had degenerated from that to something very close to a menial laborer cleaning up the laboratory . . . and that hospital were to request an extension of stay within your general limitation of five years applicable to medical personnel, would you grant that extension?
>
> Mr. Robinson (Deputy Associate Commissioner, INS): If on the record everything seemed to be regular, as indicated, we would probably, absent any other information. To put it another way, we would not go out and verify in every case whether or not these claims were true.[33]

Thus staffing needs could easily be filled in spite of the Government's proclaimed objection.

The Subcommittee concluded unequivocally that, for exchange visitors involved in medical and related health training, the objectives of the exchange program were not being fully realized; indeed, this large category constituted "the principal and most complex problem in the administration of the law." As the situation was complicated by the manpower needs of the hospitals, it afforded no easy solutions. The State Department offered three suggested changes in the immigration law to deal with the existing shortage of health manpower by divorcing this question from that of graduate medical education, thereby removing this blemish from the educational exchange program. First, it was suggested that the Immigration and Nationality Act should be amended to permit foreign medical graduates, nurses, and other related health personnel to enter the country with H visas for temporary employment or training; second, that temporary legislation be passed, authorizing the admission of these individuals as non-quota immigrants for a long enough period (at least five years) to give American medical institutions the opportunity to provide for the existing health and medical care needs of the American public; and, finally, that legislation be enacted to grant permanent non-quota immigrant classification for medical graduates by according them the same status granted to ministers.[34] In short, physicians, like clerics, would

33. *Ibid.*, 79.
34. *Ibid.*, 34.

be brought into the United States on the clear understanding that they were to alleviate this country's manpower problems, rather than on the pretense of education. However neatly this fitted the realities of the situation, it required a radical change in attitudes on the part of hospitals, professional organizations, and others (including foreign governments); in effect, it meant that the United States would have to cease posing as a donor of foreign aid (through an educational program) and admit it was the recipient of foreign largesse (by importing skilled manpower).

Protest was thus fore-ordained. The American Medical Association objected that the temporary admission of foreign physicians to the United States for the purpose of filling the service needs of hospitals as interns and residents would adversely affect the standards of medical education, and "create a corps of second-class physicians rendering second-class medical care to our hospitalized public."[35] Instead, the AMA advocated a time limit on the length of stay of foreign medical graduates in the United States (with appropriate safeguards), and enforcement of the two years abroad provision: "Every unnecessary waiver serves to defeat the basic purpose of international educational exchange."[36]

Much the same point of view was expressed by the American Hospital Association. While recognizing the staffing needs of the hospitals, the Association noted that "we are in a much better position to develop programs in order to meet our own shortages than other countries may be."[37] It suggested, therefore, increased production of American physicians through Federal funding for the construction of additional medical schools and the renovation of existing ones, and through the development of Federal scholarships for medical students and Federal grants for medical schools and hospitals engaged in educational programs -- policies which the AMA at that time opposed. Thus, increasingly, the educational, manpower, and immigration aspects of foreign medical immigration were seen as inextricably connected.

The debates of 1961, and the passage of the Mutual Educational and Cultural Exchange Act in that year, provided a watershed in governmental activity in international exchange. Fulbright scholarships were well accepted; indeed, they had achieved a special cachet of their own as a symbol of competitive, scholarly eminence. They were, however, of little relevance to the mass of physicians coming over to this country from all over the world for internships and residencies. The concept of educational exchange as a cultural weapon in international relations had lost fire. At the time of the Smith-Mundt Act it had seemed natural to consider information services abroad (such as the Voice of America) and educational exchange as part of a broad ideological package. Over the years, however, educational exchange had gained an independent momentum. The debates over the Exchange Visitor Program in

35. *Ibid.*, 115.
36. *Ibid.*, 114.
37. *Ibid.*, 116-17.

1961 were more interested in the "brain drain" of talent from underdeveloped countries to the United States than in whether the program had in fact influenced values abroad in favor of the United States. (Few voiced the sneaking suspicion that it had not.) These aspects of the Cold War period had ended. Its legacy was the creation of a program, nominally for educational exchange, whose purposes were vague, and which had become a prime vehicle for the importation of physicians to the United States.

Changing Policies Toward Immigration

The magnitude of the exchange program by the early 1960's tended to overshadow the still important role of physicians coming to the United States on immigrant visas. While the number of exchange visitors has outnumbered the number of immigrants each year, a steady stream of physicians has been entering the United States as immigrants. In the decade ending June 1971, almost 29,000 physicians entered the United States under immigrant visas, and the number of immigrants admitted in fiscal 1971 alone – 5,756 physicians – was equivalent to the output of graduates from 60 American medical schools (Appendix Table A2).

The migration of physicians to the United States was complicated by the existence of two large visa programs. Before changes were made in the immigration laws in 1965, the number of immigrants was restricted by a system of national quotas for immigration from selected areas; physicians were included with others in their country's quota. The quotas favored certain parts of the world over others, notably Europe over Asia, but there were marked variations even in Europe; it was far easier, for example, to enter from the United Kingdom than from Italy. The burgeoning Exchange Visitor Program was not so restricted, and formed a haven for those who had little hope of coming to the United States as immigrants. A former Foreign Service Officer, Gregory Henderson of Harvard, posed the dilemma:

> If, after every consideration, we still feel that, in an imperfect world, we have reason to seek an immigration program which attracts the trained men of emerging nations, let us have one. But let us argue for it openly; let us call it by its correct name, issue immigrant visas for it, and administer it as such. Let us stop concealing an immigration program under our student and international exchange programs.[38]

For physicians, the exchange program provided a major loophole to the quota system. But, with respect to all occupations, the arbitrariness of the immigration laws was being seen by

38. Henderson, *op cit.*, 351.

the early 1960's as both ineffective and unjustifiable. Finally, in October 1965, Congress amended the Immigration Act of 1952, thereby abolishing the national origins quota system after a two and a half year transitional period.[39] As of July 1, 1968, quota numbers have been distributed on a first-come basis within specified preference and non-preference categories, with an overall total limitation of 290,000 and a limit of 20,000 per foreign state. For the first time in U.S. immigration history, an annual ceiling of 120,000 was placed on immigrants from the Western Hemisphere; the remaining 170,000 immigrant visas were to be made available for aliens from elsewhere in the world.[40]

Within the Hemisphere allocations, seven preference categories were established, with visas being granted first to those falling within one of the preferences. The preference categories are used as a vehicle for the immigration of specified relatives of American citizens and registered aliens, and for immigration based on certain occupational qualifications. Members of the professions or persons of exceptional ability in the sciences or arts are covered under the category known as the "Third Preference," and skilled or unskilled workers in short supply in the United States under the "Sixth Preference."[41] Physicians fell potentially under both of these categories. The real test, however, was how far the law would be used to facilitate a more or less unrestricted entry of medical personnel.

In any event, the 1965 legislation had a dual effect on physician migration. The establishment of a relatively large allocation of immigrants from Asia (compared with previous experience under the country quotas) encouraged the entry of immigrant physicians from the Philippines, India, Korea, and other Asian nations. Thus, the national mix of immigrants began to change. At the same time the existence of occupational preferences, reinforced by increasing unemployment in the United States in the late 1960's, gave a distinct advantage to immigrants in categories of employment which were avowedly still in short supply in the United States. Medicine fell into this definition. As a combined result of the Hemisphere allocations and occupational preferences, there was both a rapid increase in the number of physician immigrants after 1965 and – its accompaniment – a dramatic rise in the proportion of physicians immigrating from countries in the Eastern Hemisphere.

Physicians on immigrant visas numbered about 2,000 a year between fiscal 1957 and fiscal 1965 (Appendix Table A5). In the latter year, about 1,000 of the physician immigrants were from Europe or Canada, and a mere 200 from all countries in Asia. Between fiscal 1965 and fiscal 1971 the annual number of physicians granted immigrant visas almost tripled, from 2,012 to 5,756. Within this total, European and Canadian immigration

39. Public Law 89-236.

40. Immigrants are now considered under one of three basic categories: whether the immigrant is a native of (1) the Eastern or (2) the Western hemisphere or whether (3) he/she is an immediate relative of a U.S. citizen. Those in the latter category are counted in addition to the numbers admitted under the other two.

41. For an individual to enter under the third or sixth preference, a certificate is required from the Department of Labor stating that there are not enough qualified workers at the place in the United States where the immigrant is to be employed, and that the alien's employment will not adversely affect the wages or employment conditions of similar workers in the United States. See U.S. Department of Justice, Immigration and Naturalization Service *1971 Annual Report*, 2-8.

42. Of 3,158 physician immigrants (including those adjusted from temporary visitor status), 840 were beneficiaries of occupational preferences under the 1965 Act. The third preference (special skills) tended to be used far more frequently than the more controversial sixth (manpower shortage). The breakdown was as follows:

	Third Preference	Sixth Preference
Admissions	544	84
Adjustments	166	46
Total	710	130

United States Department of Justice, Immigragion and Naturalization Service, personal communication.

remained fairly stable and physician immigration from South America dropped; there were only 269 such immigrants from South America in 1971, compared with 348 in 1965. Immigrants from Asian countries accounted for almost all of the increase. In fiscal 1971, immigrant physicians from Asia numbered 3,836. Forty-seven percent of physician immigrants in 1965 came from Europe or Canada and 10 percent from Asia; in 1971, only 21 percent came from Europe or Canada and 67 percent from Asia (Appendix Table A6).

The use of occupational preferences was clearly a factor in the rising figures, not only in terms of physicians entering under a preference – about one-fourth of physician immigrants in fiscal 1972[42] – but also as a general guide to the purposes of immigration to the United States, as interpreted by American governmental agencies. Indeed, the entry of foreign medical graduates into the United States was made still easier by a Labor Department decision of December 1965 to the effect that there was a physician shortage in American hospitals. Under the terms of the new immigration law, this ruling allowed doctors from abroad to petition the Immigration and Naturalization Service (INS) immediately for an immigrant visa, without applying for a Labor Department clearance – a procedure which still obtains. If INS finds the applicant's supporting documents in order, the consular officer abroad may then be instructed to issue an immigrant visa. The physician in question, as an immigrant, is then exempt from any time limitations on his stay, even if he is ineligible for licensure in the United States.

Again the various programs and agencies involved with foreign medical graduates appear to be working totally independently. But at least as far as the federal government goes, the influx of foreign medical graduates as immigrants was couched in less hypocritical terms than previously. The 5,000 physician immigrants who were granted visas in 1971 were not primarily students, but were encouraged to enter the country to help relieve the crisis in American medical manpower. Among them were almost 1,000 physicians each from the Philippines and Korea, and more than 800 physicians from India (Appendix Table A8).

The existence of relatively generous immigration procedures for physicians might be expected to reduce the number of physicians entering as exchange visitors, particularly from countries in Asia; to enter as an immigrant gives the individual unsure of his career goals an open choice whether or not to remain permanently in the United States. The number of exchange visitors, which reached a high of 5,701 in fiscal 1968, did indeed drop in 1969 to 4,460, after the new regulations went into effect. The figures appear to be on the rise again; there were 4,784 physician exchange visitors in fiscal 1971. But the balance between immigrants and exchange visitors has finally changed. In

1971, more physicians entered the United States as immigrants than as exchange visitors (Appendix Table A2).

While immigrants presumably intend to stay and exchange visitors merely to visit, the functions of the two kinds of visa are still, however, not absolutely distinct. Someone coming for training may prefer to do so on an immigrant visa, leaving his ultimate options open, even though he or she may return home again. On the other hand, others who may in fact remain in the United States may enter as exchange visitors, either because they intend only a temporary stay, or because of the relative ease in obtaining this kind of visa in their country of nationality. The differences by country in the kinds of visas preferred by physicians, therefore, have to be carefully interpreted, but there are marked differences. For example, virtually all of the 1,003 Korean physicians entering the United States in fiscal 1971 did so as immigrants. In contrast, the great majority of Jamaicans, Mexicans, and Japanese entered as exchange visitors. In many other countries there was a relatively balanced mix; India, for example, accounted for 821 immigrant physicians and another 692 exchange visitors (Appendix Table A8).

The distinction between immigrant and exchange visitor status has also been blurred by an easing of the process by which exchange visitors in the United States can transfer to immigrant status. In fiscal 1965, only 68 physicians were granted such adjustments; the number rose to 505 in fiscal 1970 (Appendix Table A4). In the latter year, one of every six immigrant visas granted to physicians was to someone who was already an exchange visitor. In plain language, it has become much easier for physicians to enter the United States for permanent residence since 1965, and easier for exchange visitors to adjust their status. Assuming present trends continue, in addition to the rising number of physicians granted immigrant visas, it may be expected that a substantial proportion of exchange visitors coming to the United States will eventually become immigrants.

The brain drain aspects of the 1965 legislation have by no means been ignored by governmental groups. But while there have been continued expressions of concern about the foreign policy aspects of physician migration from Third World countries, concern about domestic policies -- the physician manpower shortage in the United States -- has tended to predominate. A staff study, undertaken for the House Committee on Government Operations in 1967, noted that the percentage of physician immigrants from developing countries had risen from 45.2 percent in 1956 to 58 percent in 1966.[43] The report also noted the *laissez-faire* attitude of the State Department toward this movement. But while, in theory, the Department recognized that action should be taken by the Government to train more Americans to fill those positions now being held by foreigners,[44] in the final analysis it could only counsel other countries to look

43. *The Brain Drain into the United States of Scientists, Engineers, and Physicians. A Staff Study for the Research and Technical Programs Subcommittee of the Committee on Government Operations.* House of Representatives, 90th Cong., 1st Sess., July, 1967, 6.

44. "An effort to increase the number of U.S. medical schools, for example, would be the best long range approach to helping other countries retain the services of their own native physicians." *Ibid.*, 103.

after their own interests. The United States cannot, it was claimed, slow down its economy or discriminate against individuals with particular skills from particular areas; if a country is suffering from a serious outflow of necessary personnel, it, and not the United States, should assume the burden of restrictive action.

While such comments swept physician migration under a rug of rhetoric, a governmental committee was concurrently trying to come to grips with the role of foreign physicians in the domestic manpower situation. The National Advisory Commission on Health Manpower, appointed by President Johnson in 1965, reported in 1967 that the estimated total minimal cost necessary to replace the foreign trained physicians who were licensed in the United States from 1961 to 1965 would be somewhere between $855 and $925 million.[45] The Commission's Panel on Foreign Medical Graduates suggested major changes in the education of foreign doctors in the United States. First, it was recommended that the existing screening procedures for foreign physicians entering the United States be made stricter and more demanding, to insure that these doctors have reached an educational level sufficient to allow them to participate productively in American graduate educational programs. It was suggested that the ECFMG examination be strengthened, or that a new type of examination be introduced. The Panel also sought to improve the quality of the educational programs being offered, by recommending that, except in special circumstances, all foreign trained physicians entering the United States be given an orientation and educational program specifically designed to meet their needs, which would insure their proper introduction into the American system of graduate medical education and health care.

In addition, the Panel made several recommendations dealing with the immigration aspects of medical exchange. It was suggested that the issuance of a J visa be limited to graduates of foreign medical schools who have been selected by their medical school faculties or other official agencies, instead of leaving that selection totally to American hospitals, with the sole restriction that candidates have passed the ECFMG examination. Physicians would thus participate in educational programs planned jointly by their own school and the American medical school or hospital which they attend; the intention would be to design educational programs which would equip the participants to practice or teach in their own countries. In short, the goal would be to return to the original idea of educational exchange, with the United States as the primary donor country. Among other recommendations, the Panel urged that the visa policies of the United States be revised, to insure that foreign physicians on exchange visitor visas for programs in graduate medical education

45. National Advisory Commission, *Report*, 84.

return to their countries of origin at the completion of their programs, that foreign medical graduates with other intentions be required to qualify for immigrant visas, and that existing regulations be changed so that exchange visitor and/or immigrant visas on an occupational preference basis are not issued to physicians unless they have been certified by the ECFMG. Most of the Panel's recommendations remain unimplemented; but they continue to be discussed and the problems they attempted to grapple with are still at issue.

Recent Trends

In the meantime, the immigration issues have become more prominent. The relative losses of physicians to the United States from certain countries (notably Korea, Iran, Greece, and Peru), even before changes in the legislation, were noted in an excellent analysis of foreign physician migration by Kelly West in 1965.[46] Korea, for example, was producing some 600 medical graduates a year in the early 1960's; as many as 200 of these graduates were in training in the United States, and an estimated 20 a year were remaining as immigrants. These numbers may seem small, but they can be critical to a country with one physician for every 3,500 population (compared with one to every 600 population in the United States), which makes a direct financial investment in a student's medical education. With the 1965 changes, the situation has recently become worse. By the end of 1970 there were 1,309 Korean graduates in internship and residency positions (Appendix Table A9), six times as many as were here in 1963, and potentially a significant loss in terms of Korean medical manpower.[47]

India is also now providing a major source of physicians for America. Indeed, Indian physicians represented the largest national group to arrive in fiscal 1971 – a total of 1,513 physicians (Appendix Table A8). The Philippines provided 1,365 physicians; Korea accounted for 1,003 entering physicians. These developing countries are the present "big three" donors of physicians to the United States. They also contribute by far the largest sector of foreign physicians in graduate education (Appendix Table A9).

The change has been recent and dramatic. The rise in the number of Korean medical graduates has been noted. The number of Indian graduates in approved graduate education positions in the United States rose from 647 in 1963 to 2,525 in 1970. The Philippines has been a major provider of interns and residents (on exchange visitor visas) for U.S. hospitals for a

46. Kelly M. West, "Foreign Interns and Residents in the United States," *Journal of Medical Education, 40* (1965), 1110-29.

47. Paul S. Crane, an American physician teaching in a Korean medical center, commented on the Korean dilemma: "We found that by training Korean physicians along international standards, we had opened the door for them to escape the bindings of a developing nation. They found a welcome in the affluent lands, principally in the United States. This draining of the medical pool in the developing community of Korea, and other such nations, is leaving them as poor today in personnel as they were 25 years ago, before this type of quality medical training was introduced." The magnitude of this problem can be seen in the fact that 1,913 physicians have left South Korea since 1962, and only 49, or 3 percent, have returned. See Paul S. Crane, "An Unresolved Problem for Developing Countries: Korea as Exhibit A," *Journal of the American Medical Association, 209* (1969), 2039-41.

48. "Philippines Lacking M.D.'s; Ceylon Acts on Shortage," *Medical Tribune*, Sept. 22. 1971.

49. Hearings Before Subcommittee No. 1 of the Committee on the Judiciary, House of Representatives, 91st Cong., 2nd Sess., on H.R. 9112, H.R. 17370: To Amend the Immigration and Nationality Act, and for Other Purposes, July 16, 22, 29, August 5 and 6, 1970.

number of years; the number of them in graduate training rose from 2,102 in 1963 to 3,003 in 1970. For this group, too, however, the 1965 legislation legitimized permanent emigration to the United States. The number of physicians on immigrant visas from the Philippines rose from a mere 66 in fiscal 1965 to 980 in 1971, while the number of exchange visitors declined, from 701 in fiscal 1968 to 385 in 1971.

The loss to the Philippines, with its large production of medical graduates, and what by now has become an expectation of heavy emigration to the United States, may not be as serious in terms of health services as the loss to other countries which rely more heavily on their domestic production of physicians. But if the Philippines is content to see large scale emigration of skilled manpower (and undoubtedly welcomes the dollar flow back to relatives from those in American medical positions), this outlook is shared by few other countries.

India, for instance, lost 821 of its physicians – equivalent to the graduates of eight or ten American medical schools – to permanent residence in the United States in 1971 alone; in addition, it will probably see little service from the additional 692 Indian physicians who entered as exchange visitors during the same year (Appendix Table A8). In an attempt – as yet apparently unsuccessful – to stop the outflow of physicians, the Indian government prohibited the further administration of the ECFMG examination on its territory in 1967.[48] The government of South Korea is also attempting to control physician emigration. In Ceylon, faced with the threat of a major outbreak of polio in 1971, the government was forced to take emergency steps to halt the outflow of physicians, including the denial of exit permits to physicians leaving to take jobs abroad.[49] So far such attempts do not appear to have controlled permanent emigration to the United States, but they may have a long-term effect for, as things are, the only foolproof way to stop emigration is to cut off opportunities from these and other countries to enter the United States, even as exchange visitors.

Overall, however, the American approach appears to be moving more towards emphasizing national needs than international concerns. Indeed, American policies since the 1965 legislation have favored the further easing of restrictions on immigration. During 1970, a subcommittee of the Judiciary Committee of the House of Representatives held hearings on several bills to iron out difficulties which had emerged since the passage of the immigration law and to examine the manner in which the law was working.[49] Common to all the bills was an attempt to facilitate the entry of skilled personnel from abroad, particularly physicians. The bills sought to increase the number of third preference visas issued annually and to make the application of the foreign residency requirement much more flexible. Representative Frank Horton (Republican, New York), a sponsor of one of the bills, voiced a general attitude expressed

during the hearings: "I am not too concerned about the brain drain . . . we need doctors and there are doctors available and if we can take advantage of that then I think we should."[50] Similar views were expressed by Representative Ogden Reid (Republican, New York):

> The increase in the third-preference percentum from 10 to 15 is . . . a necessary change. I am informed that beneficiaries of third-preference visas are often doctors from the Philippines and India and the additional visas will make it possible for a larger number of them to come to this country. While . . . we must do much more to encourage training of doctors and better hospital facilities in the United States, in the face of the current shortage of doctors, those from foreign lands are essential to keep hospitals staffed.[51]

While none of the bills was passed, the comments on the role of immigration to ease America's manpower shortages — and these are not atypical — indicate a Congressional mood of self-interest in the 1970's. Current immigration policy appears to be closely tied to assumed needs for particular kinds of manpower in the United States. Thus, the 1965 immigration law has been administered, logically, in terms of a stated doctor shortage, to encourage direct immigration of physicians and to assist foreign medical graduates who wish to remain in the United States after their training is completed. For instance, although the third preference visa category is oversubscribed, a physician who comes to the United States on an exchange visitor visa, and subsequently decides to change his status to third preference, is shown a certain favoritism. If otherwise qualified and approved by INS, he may wait in the United States until a place on the third preference quota is available. During this time he is authorized to work. In this way a foreign medical graduate can avoid the foreign residency regulation and remain here indefinitely, regardless of his stated intentions on arrival.

Prior to the House hearings, moreover, Congress has already taken action to dilute the foreign residency requirement for those on J visas (exchange visitors). Faced with an accumulation of over 800 private bills to waive the two years abroad provision for particular individuals,[52] legislation was passed to eliminate this requirement for persons coming to the United States on private funds, who were not from countries where their special skills were in short supply.[53]

This latter specification was to be determined on the basis of a list of "shortage countries," classified by professional skills, to be drawn up by the Secretary of State. Further, persons from countries not on the list were to be eligible for immediate immigration, unless they are sponsored by the United States Government or their own. As most physicians come to this

50. *Ibid.*, 76.

51. *Ibid.*, 78.

52. In fiscal 1970, the foreign residence requirement was waived for 741 physicians surgeons, and dentists who were in the United States on exchange visitor visas. This group formed a significant sector of all such waivers, only 1,731 being granted for all occupations in that year. *Annual Indicator of the Immigration into the United States of Aliens in Professional and Related Occupations, Fiscal Year 1970*, Department of Justice, Immigration and Naturalization Service, (1971), 25.

53. Public Law 91-225. The legislation also facilitated the temporary admission of highly skilled aliens and created two new nonimmigrant classes, for intracompany transferees and for fiance(e)s of U.S. citizens. The number of physicians entering as "Workers of distinguished merit and ability" rose to 178 in fiscal 1971, and there were 9 intracompany transferees (See Appendix Table A3).

country on private funds, they were immediate beneficiaries of this change. Instead of applying to the Department of Health, Education, and Welfare for a waiver, they could go directly to INS for a change in their visa status, provided they were not from a shortage country.[54]

This legislation became effective in 1970, with the expectation that the Secretary of State would publish the list of "shortage countries" in short order. As of March 1972, this list had not been made available. In the meantime, everyone on a J visa had the right to apply for a change of status to an immigrant visa, waiting in the United States until his slot had come up.

A final indication of a present governmental policy of attracting foreign physicians for immigration can be seen in a regulation change proposed by the Department of Labor in January 1971.[55] This change would tighten the qualifications for immigration on the basis of professional skills – immigration under the third preference provision – in the light of present economic conditions and professional unemployment in the United States. In the future, prospective immigrants who are auditors, physicists, chemists, chemical engineers, and others in stated categories will have to submit applications for individual review by the Department, with the expectation that few will be approved. Professionals in the medical, paramedical, and religious fields, however, are specifically excluded from the change, on the grounds that, in these occupations, there is a nationwide shortage.

As in the past, however, there is no consistent policy; thus one potentially restrictive measure has been undertaken at the urging of the professional associations of American medicine. In recent years the ECFMG, the AMA, and the AAMC have complained to the Department of Labor over its practice of issuing a third preference visa to any physician who is licensed in his own country, regardless of whether he is eligible for licensure in the United States. It was this practice which made it possible for physicians from the Philippines and elsewhere to enter the United States even though they were unable to take up graduate training, or to practice medicine in other spheres, because of a lack of professional qualifications, in particular a failure to achieve certification by the ECFMG. They were thus removed from the practice of medicine in both their own countries and the United States.

As a result of these efforts, the regulations for immigrant labor certification have been revised for the Schedule A labor grade, which includes all physicians. Under the new regulations, any foreign physician with a degree from a medical school outside the United States or Canada is required to present evidence that: (1) he has either met the requirements for licensure or is eligible to take the state licensing examination in the state in which he intends to work; or (2) he has met the

54. HEW figures for fiscal year 1970 indicate that 379 health personnel applied for waivers from the foreign residency requirement. Of these, 90 were approved and 35 were eligible to apply directly to INS. These figures were supplied by Mrs. Ann Mursell, Office of International Affairs, DHEW.

55. Reported in *New York Times*, Sunday, January 31, 1971, section 1, 20.

requirements for an appointment to an approved internship or residency and is being offered such a position; or (3) he has passed the ECFMG examination; or (4) he has an appointment in a situation which does not involve direct patient care, such as teaching, research, or laboratory work.[56] These tightened regulations will presumably make it more difficult for less competent (and unemployable) physicians to enter the United States. They will not necessarily of themselves reduce the number of immigrants and exchange visitors to any significant extent.

This action did, however, point up the potential role of the medical professional organizations as guardians of medical education in the United States, working with and through governmental agencies. The establishment of a Commission on Foreign Medical Graduates by leading medical associations(led by the American Medical Association and including the ECFMG, AAMC, American Board of Medical Specialties, Federation of State Medical Boards, and other interested groups), which became active in September 1970, provided a vehicle for further coordinated action. Indeed, the Commission is specifically enjoined in its articles of association to assist in the development of policies concerning the entry as well as education of foreign trained physicians.

Meetings between Commission representatives and the Department of State finally generated a coordinated approach to the entry of physicians on exchange visitor visas into graduate medical education, effective June 1972. The Department of State is recognizing the Commission as the sponsor of foreign medical graduates for internship, residency, and specialized training. Instead of each of the 900 hospital programs recognized for Exchange Visitor Programs acting independently, the official documents for the entering of exchange visitors will be channeled through the Commission; consular officers and INS officers are being informed to this effect, as are the relevant hospitals. In the future they must work through the Commission.[57] Only exchange visitor visas are affected, however. Hospitals may still have the option of submitting an H visa petition to INS on behalf of workers of distinguished ability, other temporary workers, or industrial trainees (see Appendix Table A3); and immigrant visas remain independent.

This move opens up the prospect of centralized planning for foreign physicians entering the United States as exchange visitors, including the matching of appropriate entrants with suitable training opportunities. It provides a vehicle for orientation programs and specialized training sessions. But it may also serve to make even more efficient the migration of physicians to the United States. The possibility of a numerical limitation on foreign trainees in the United States, feasible under the new joint arrangements, remains a matter for speculation. Discussions so far have focused on the education and acculturation of foreign

56. *Federal Register*, 36 (February 4, 1971), 2465.

57. U.S. Department of State, personal communication. The system will be financed by a $30 contribution from each foreign medical graduate.

medical graduates in the United States, on developing a computerized data bank to ensure efficient placement of foreign trained physicians in American hospitals, and on special needs and problems of entering physicians and employing hospitals. The emphasis, at least so far, is on improving the system rather than on reforming it; on domestic action, rather than on wider international needs.

The present situation, then, is one of permissiveness toward the entry of foreign physicians into the United States through both the exchange visitor and immigrant procedures. The immigration laws are at least in part predicated on the employment demands of the United States. In this the physician immigration patterns are logical and successful. The United States is now gaining 3,000 additional licensed practitioners a year from abroad for domestic practice. Moreover, once here, even those coming nominally for training tend to overstay their training period. There were 10,000 graduates of foreign medical schools in approved internships and residency positions in this country in 1963. By 1970, 3,100 of these physicians were identified as being in office practice in the United States; another 2,700 were still working in American hospitals, as interns, residents, or full-time staff; about 800 were in teaching, administration, and research positions in this country; and 200 were here in other positions or inactive.[58] These patterns are expected to continue, although figures will be greater in the next few years, reflecting the increasing number of physicians entering the United States since 1963.

58. Preliminary findings from a study of AMA data. James Haug and Rosemary Stevens, "Follow-up Study of Foreign Medical Graduates, 1963 and 1970," unpublished manuscript, 1972.

Postscript: The "skills list" for exchange visitors was published after this book went to press. It appears in the Federal Register for April 25, 1972.

4

The reasons physicians migrate are complex and -- as part of a general international movement of physicians, chiefly from the poorer countries to the richer -- outside the scope of this study. Some comments, however, have to be made on the general phenomenon of physician migration as a necessary context to considering the various implications of the flow of physicians to the United States, information gaps and research needs, and current pressures for change in the "foreign medical graduate situation."

A medical degree, unlike the credentials of many other professions, commands international recognition. As has been demonstrated in preceding chapters, however, foreign medical graduates in the United States make up anything but a homogeneous group. In fact, they do not necessarily have anything in common other than the fact that they were educated in the some 800 different medical schools located outside the United States. Moreover, these medical schools vary in standards, in content and plan of curriculum, in teaching methods, and in various other characteristics throughout the world.[1] Yet the young American, Filipino, Briton, Indian, or Korean seeking to widen his or her horizons is well advised to choose a medical career. A legal education or teaching diploma, for example, is not so easily negotiable. Even in other technical fields, including science and engineering, there are relatively few job openings abroad compared with those available to physicians. There may not be much preselection of medicine by students whose interests are international. Nevertheless the holding of international credentials gives the physician a "take it or leave it" choice over the kind of job he will accept in his home country. Emigration is a real career alternative.

1. This is not coincidental. In many cases medical schools in developing countries have been modeled on schools in England or the United States. The Faculty of Medicine of the University of the West Indies, for example (which has a high loss rate of graduates to North America), like other schools established in former British territories initially had a special relationship with the University of London. A number of schools in South America have sought aid from universities in the United States. Where there are not direct relationships, there is mimicking. Philippine medical schools, for example, since 1963 have required four years of college and four years of medical education -- a pattern now being reconsidered in the United States. On general developments, See John Z. Bowers (ed.) *Medical School for the Modern World* (1970) and Elizabeth Purcell (ed.), *World Trends in Medical Education* (1971), both published for the Josiah Macy, Jr., Foundation by the Johns Hopkins Press.

2. See Maurice King (ed.) *Medical Care in Developing Countries*: A Primer on the Medicine of Poverty and a Symposium from Makerere. (London, Oxford University Press, 1966); Gordon Wolstenholm and Maeve O'Connor (eds.) *Health of Mankind*, Ciba Foundation 100th Symposium (Baltimore, Williams and Wilkins, 1968).

3. The paradox of the "overflow" of doctors is considered in detail, in relation to specific countries, in two important contributions to the "brain drain" debate: Committee on the International Migration of Talent, *The International Migration of High-Level Manpower* (New York, 1970); Oscar Gish, *Doctor Migration and World Health* (London, Bell, 1971).

The presumptive international comparability in medicine has become a seductive factor in international physician migration. Studies point up the existence of two very different sets of health problems in developing and industrial nations — the one focusing on infectious diseases, rural poverty, preventive care, and a youthful population; the other on chronic diseases, urban affluence, specialized treatment, and the problems of the aged.[2] But to no avail. Medical education throughout the world is typically urbanized, intellectualized, specialized, and hospital-based. No country, including the United States, has yet produced physicians who enjoy practicing outside towns and cities. As a result, medical schools in Third World countries, while offering a valuable base for the training of medical specialists, scientists, and teachers, are too often not producing physicians who are appropriate for, or motivated toward, the major health care needs of their own nations.

In this sense, it is not always appropriate to speak of a "drain" of high level manpower from a developing country to the United States. There may in fact be insufficient posts in the developing country for physicians who are in essence qualified in urban medicine. A particular Filipino physician may aspire to specialist practice in Manila, or a Thai physician in Bangkok. If these opportunities are not available (both Manila and Bangkok having a surplus of physicians), the physician may logically turn toward the international stimulation and interest of specialized practice or education in a foreign city, rather than to professional isolation in his own country's vast rural areas. In contrast, this apparent "overflow" of talent may feel more suited scientifically for practice or future education in advanced countries, such as Britain, Canada, or the United States.[3] It is not surprising, then, that the United States with its advanced training facilities, open-door immigration policies for physicians, job opportunities, and economic and cultural allure, should attract many thousands of physicians on both a temporary and a permanent basis.

These points, however, do not negate the formidable international responsibilities imposed on the United States by the annual appearance of 10,000 physicians from countries with a vast range of languages and cultures, many of which have totally inadequate health services. The domestic implications of migration should be reviewed in this context.

Areas for Action

Two recurring themes have been stressed in this study. The first is the lack of an integrated and recognized policy toward the immigration and education of foreign trained physicians. The second is the lack of reliable information about the basic characteristics, expectations, and roles of foreign trained physicians in the United States and, more generally, about physician manpower roles in the American health system.

The results of these deficiencies have also been noted. On the one hand are the separate, sometime conflicting policies toward foreign medical graduates represented in hospital recruitment and employment practices, professional licensure and certification, and immigration and visa arrangements. On the other hand are the as yet insufficient data to make anything other than crude generalizations about the relative roles, competencies, and manpower contributions of foreign trained physicians in the United States.

I. MANPOWER DEFINITION

The Panel on Foreign Medical Graduates of the National Advisory Commission on Health Manpower (1967) observed that the important place of foreign medical graduates in American medicine is a reflection of the fact that "the United States has failed to produce enough physicians to meet its own needs."[4] Evidence collected for this study sheds doubt on this statement in several respects.

First, clearly much if not most of the influx of foreign trained physicians in the last 20 years has been the result of the hospitals' demands for additional house staff, not necessarily of a general lack of physicians within other parts of the medical system.

Second, the concept of a "need" or lack of physicians is complex. Far more must be known about specific manpower shortages by area and by specialty so that need may be measured against stated planning criteria. Indeed, the United States has problems of appropriate manpower production which are similar in essence, if differing in scope, to those of the developing nations. Both stem from the lack of coherence between the educational system and the health care delivery system.

The United States, being rich and retaining a largely private fee-paying medical system together with a relatively open system of hospital staff appointments, can absorb into its cities what would be regarded elsewhere as an "overflow" of physicians. In large part, however, the influx of foreign physicians represents deficiencies in health care planning and organization in this country at least as much as an outflow from other countries may also represent ineffective planning and organization.

Aided by federal government subsidy, American medical schools are making heroic efforts to increase the number of medical students. Merely increasing the base supply of students in American medical schools will not of itself serve to plug the gaps in service in the present array of 63 or 64 recognized specialties serving a 200 million plus population, however, and considerable interest is also being taken in the production of physician associates or assistants. The widespread development of such programs to provide care in needy rural and urban poverty areas in the United States, combined with the additional supply of American trained physicians, might do much to meet critical "need" for medical care.

4. National Advisory Commission, *Report*, part 2, 71.

The manpower questions, however, do not rest on some magic number. Rather, they depend on specific decisions being taken as to how many physicians, of what kind, should be trained, and what actions should be taken to create a favorable distribution of physicians to provide specific services to the population of the United States. The first and major area for action is thus the development of physician manpower norms for defined populations, by specialty, function, and region. Such norms should take into account the expected number and roles of physician assistants and associates and other health care practitioners.

A second and related area for action is the development of a system of internships and residencies with goals and priorities which relate both to the undergraduate (MD) curriculum and to defined manpower goals. It is ironic that in the world's mecca for medical science there is as yet no cohesive system of medical education. Each year the number of available positions for interns and residents has increased because additional programs have been accredited by the profession's accrediting committees. If the number of positions offered were cut back (and held) to the level prevailing, for example, in 1964, there would be virtually no vacancies; and as an increasing number of American graduates flowed out of the schools, they would eliminate the need for foreign trained physicians in these positions. A decision by professional accrediting bodies or government agencies, or both together, on the number of physicians to be trained — and where — is an essential framework for considering the various needs, roles, and functions of foreign trained physicians.

II. VISITORS AND IMMIGRANTS

It has been observed that foreign medical graduates fall broadly into two groups: those coming primarily for advanced training (and the prestige of such training) in the United States, who will probably return to their own countries to teach, practice, or do research; and those (by far the largest group) who are *de facto* immigrants to the United States. Our study has demonstrated that the vast majority of exchange visitors who come for training are no different from those who come on immigrant visas. Yet, while there may be no clear distinction by type of visa, the *prima facie* goals of the two groups are very different. The first suggests the goals of the existing Fulbright program; such students are best placed at advanced university centers in their chosen specialties. The primary need of the second group, as with other immigrant groups, is for rapid assimilation into professional and cultural life in the United States.

Clarification is needed of the relative importance and roles of the two groups in terms of the administrative machinery which can best deal with their requirements. Questions to be addressed include: whether the primary educational role of the

United States with regard to other countries should be to teach teachers and researchers who can then transmit their knowledge to students in their own countries; whether all foreign medical graduates given exchange visitor visas should be recruited and sponsored by the government, medical schools, or other recognized institutions in their own countries, and have a guaranteed job on return; and where foreign medical graduates should be located in the system of graduate medical education in the United States (e.g., whether preference should be given for education in specialist departments physically located in medical schools; what special kinds of educational arrangements are necessary). Logic would suggest the eventual limitation of the Exchange Visitor Program to those coming under the sponsorship of their own governments or institutions, under a much better coordinated American sponsorship (e.g., through joint university selection committees), or through both.

The new system being established for exchange visitors by the Commission on Foreign Medical Graduates should ensure that physicians coming for advanced training will receive appropriate placement for their needs. It also provides a potential focus for the selection of physicians as exchange visitors. Whether this will become a second stage in the Commission's activities remains to be seen. In any event, the relatively flexible immigration system is a more appropriate vehicle than the exchange program for physicians who seek permanent ties with the United States.

Among the procedures to be considered for facilitating the transfer of foreign graduates into the American system are how far participation in the National Internship and Residency Matching Program can (or should) be encouraged so that this becomes a recruitment option for foreign trained physicians; whether participation in accredited orientation programs should be mandatory; the possibility of requiring accredited hospitals to pay for English instruction for foreign medical graduates who would benefit from it; the likelihood of assigning quotas or ceilings on the number of foreign medical graduates relative to American graduates in accredited hospitals, and by areas or regions; the establishment of welcoming organizations, host families, and special arrangments by medical associations, to integrate the foreign physician more fully into American culture than at present.

III. HOSPITAL STAFFING

Besides developing policies for American medical education and the education of foreign trained physicians, actions are also needed in the critical area of hospital staffing. Some hospitals are experimenting with alternative staffing arrangements – alternative, that is, to having interns and residents. But general strategies need to be developed in the light of any possible reduction in the number of foreign trained physicians (for

example, through changes in the immigration laws).

In addition, the future implications of the present movement toward university affiliation of all graduate educational programs (which may lead to the dropping of some programs) need to be assessed, as does any tightening-up of the number of available training posts through the machinery of internship and residency accreditation. Nonphysicians (nurses, physician assistants, blood-drawing teams, etc.) may have an increasing role in undertaking work currently being performed by foreign trained physicians, particularly in nonaffiliated hospitals. Action is needed in defining these roles, in relation not only to planning training programs, but also in considering possible constrictions on such personnel by existing medical practice laws and malpractice insurance arrangements.

IV. CERTIFICATION AND LICENSING

The point emerges time and again in this study that the foreign medical graduate cannot be considered apart from more general manpower questions in American medicine. Yet the result of professional policies toward foreign trained physicians has been to isolate these physicians by providing a series of examining and other mechanisms which are different from those provided for American graduates: the ECFMG and State Board examinations, not the National Board examinations; little utilization of the National Internship and Residency Matching Plan; different requirements for licensing in the states; and often special arrangments for taking the specialty board examinations. Foreign trained physicians have thus been accepted but not assimilated into the professional system.

The loudest objections to the lack of assimilation are coming from American graduates of foreign schools, but immigrants have an equally strong case for being admitted to the same system of testing and licensure as American born and educated physicians. Part of the problem up to now has been a refusal to recognize the large stream of immigrants coming into American medicine. Part has been a lack of confidence in American testing techniques.

Needed action in these areas includes not only continuing experimentation with various testing techniques, but also a reevaluation, in the light of established goals for training both American and foreign medical graduates, of the kind of skills and competence to be expected of these physicians at various stages in their careers. Meanwhile, foreign physicians should be given access to National Board examinations. If, indeed, the ECFMG is the equivalent of National Board Part II, foreign graduates should be entitled to take at least Part II and Part III. They could then be given endorsement and reciprocity for licensure on the same basis as American graduates. In addition, foreign trained physicians should have the same access to the FLEX examination as American graduates. All citizenship requirements

for licensure should be abolished.

V. INTERNATIONAL AID

All these areas for action concern the role of the foreign trained physician in America. The international aspects of physician migration to the United States, while raising a different set of issues, are no less important. A United Nations study estimates that the Philippines contributes $1.5 million to the U.S. economy each year, the estimated annual cost of a loss of one-fourth of all physicians.[5] An Indian study estimates that the long term capital investment of a donor country in 1,000 physician emigrants (rather less than the number of Indian physicians who entered the United States in 1971) is as much as $35 million, taking into account their economic potential.[6] Exact figures are unimportant, but the existence of such estimates is important in two respects. Not only do they illustrate the economic magnitude of such transfers, they also represent an increasing concern by international agencies and donor countries in foreign aid flowing into the United States by way of physician migration.

Some of the investment of foreign countries in medical education is more than repaid to the donor countries in terms of physicians who return from the United States with a higher level of skills. Increasing the return rate would thus have direct economic benefits. What information there is, suggests that those physicians who do return tend to have positions awaiting them in their home country, arranged either before they left or during their absence in the United States; but such jobs tend to be academic positions rather than a return to practice, and the actual group of physicians who circulate in this manner is relatively small.[7] Turkey, for example, has an estimated 2,200 doctors living abroad. While it is thought that many of these would return if there were acceptable jobs in Turkey, their return is largely predicated on academic positions being made available in new teaching institutions -- which would presumably add to the existing "overflow" of urbanized physicians, rather than provide rural health care services to the Turkish population.[8]

Various aspects of this phenomenon deserve scrutiny and evaluation by the United States. The first is the development of joint or coordinated teaching programs between foreign governments or medical schools and appropriate organizations in this country, to develop the best possible teaching programs for those foreign teachers and research workers who will return to their home countries. Here the Commission on Foreign Medical Graduates may perform a major service.

A second question for critical exploration is the American role in subsidizing improvements in health services in developing countries, directly and through international organizations -- for example, through programs of preventive medicine, organiza-

5. United Nations, Social and Economic Council, *Outflow of Trained Personnel from Developing to Developed Countries*, Report of the Secretary General, 9 June, 1970, Table 5; Addendum, 15 June, 1970, 54-58.

6. P. N. Chhuttani, in John Z. Bowers and Prof. Lord Rosenheim (eds.) *Migration of Medical Manpower* (New York, Josiah Macy, Jr., Foundation, 1971) 19.

7. Graduates of the Universidad del Valle, Colombia, may be used as an example. Despite substantial migration to the United States, only 4.3 percent of its graduates between 1958 and 1968 have emigrated permanently. A study indicated that the availability of positions, arranged before they left or while away, was a major factor in the return rate. These physicians were also motivated by a desire to raise academic standars in Colombia. They returned, therefore, with a strong interest in university teaching. *Ibid.*, 144.

8. *Ibid.*, 120.

9. Committee on the International Migration of Talent, *High-Level Manpower*, 710.

10. Bowers and Rosenheim, *Migration of Medical Manpower*, 30.

tional improvements in health services, and the development of nonphysician personnel. Better use of trained manpower in other countries should serve to restrict the emigration of this manpower and thus deal with physician migration at the source.

A third possibility is sponsorship of Centers of Excellence in other countries. These would provide training for outstanding individuals, and an intellectual center for their work. A recent study cited the Hacettepe University Medical School in Ankara as an example.[9] Such centers can provide a center for medical research and development in the home country and attract returning emigrants. Because of the large expense of medical centers, international aid or collaborative efforts may be not only desirable but necessary.

VI. NUMERICAL LIMITATIONS

In numerical terms, such centers would probably serve only a small minority of present emigrants. The "pull" factors that the United States exerts over foreign trained physicians who might otherwise remain in or return to their own countries thus deserve special scrutiny. Recent efforts by several countries to restrict emigration reflect an increasingly articulated concern over the "brain drain." Moreover, the lack of success of control measures up to now makes the United States particularly vulnerable to criticism as an imperialist, grabbing nation.

A government health officer from Pakistan, which loses half of every crop of medical graduates to other countries (and which has 500 physicians now in graduate training in the United States) recently recommended international regulation to prevent the crime of medical hijacking. Physicians from a developing country would not be allowed to study overseas for longer than 3 years without the prior approval of their government.[10] Such a proposition, however, is unlikely to be implemented by international agencies. Even if it were, individual countries cannot effect the return of someone who is in the process of gaining citizenship elsewhere.

The United States, however, could limit the number of physicians coming to the United States through its immigration policies. Immigration and visa policies, as has been remarked, are geared to the apparent demand for labor in the United States. Yet to speak of a manpower shortage in the United States, with one physician to every 600 population, in comparison to a country in which there is one physician to 3,000 or even 20,000 persons, raises far-reaching questions as to the international responsibility of the United States. While it would be alien to the traditions of the immigration process, and arrogant of the United States, to use visa arrangements to refuse to accept physicians from specified under-developed countries without their consent — thus making other governments' policies for them — international comity may demand that the United States apply its visa laws uniformly and not discriminate in making the entry of

physicians relatively easy. The use of such preferences is in need of serious reappraisal.

At the same time, specific consideration should be given to countries which do regard themselves as "shortage" countries with respect to a loss of physician manpower to the United States. A limitation of the Exchange Visitor Program to those coming in under institutional sponsorship in their home countries would provide control by donor countries over those coming for organized advanced training, while not excluding other physicians from entering under different visa arrangements, for example as temporary visitors or immigrants. Meanwhile, the development of the list of shortage countries by the Department of State (presumably after consultation with, and ratification by, foreign governments), for exhange visitors entering under private funds, while an unwieldy form of restriction, does attempt some coordinated policies for migration.

More immediate forms of assistance by the United States, as suggested elsewhere,[11] are development on request of special analyses of migrants in the United States, assistance in locating migrants and in helping recruiters from developing countries, and cooperation with representatives of developing countries and influential groups in the United States to moderate migration — by, for example, reducing available hospital positions and recruitment efforts. In addition, in a reversal of recent trends, a firm line could be taken on the mandatory return of foreign physicians on temporary visas to their own countries.

Whatever the specifics, coordinated policies are needed with regard to visa arrangements for foreign physicians. The various, sometimes conflicting, and often inert roles of the Departments of State, Labor, and Health, Education, and Welfare, as well as that of the Immigration and Naturalization Service, need to be clarified. Without deliberate efforts, the traditional American political pluralism, disseminating decisions over an array of governmental agencies and private institutions, is likely to undermine even limited attempts to stem the one-way flow of foreign medical talent to this country.

VII. AMERICANS OVERSEAS

A final, but by no means negligible, sphere for action concerns the peculiar role of the American citizen in foreign medical schools. If there is indeed a shortage of American physicians, a much greater flow of transfers of Americans from foreign to American medical schools in the second and fourth years of the curriculum should be considered. Special, or in some cases remedial, courses may be required for those who wish to return but have had insufficient or inappropriate training or experience for such transfers. Present plans for clerkships in American medical schools for Americans who have completed the medical curriculum abroad (but not an internship) may provide a useful precedent for such efforts.

11. Committee on the International Migration of Talent, *High-Level Manpower*, 718 and passim.

In addition, the funding or direct sponsorship of American students abroad by the U.S. government should be considered, as part of the current national effort to increase the supply of physicians. This might also include direct grants to the foreign medical schools at which such students are studying.

These ideas are not new. Indeed, student support of U.S. nationals studying medicine abroad was included in the Comprehensive Health Manpower Training Act of 1971, although funds have not been made available. What is needed is vigorous discussion of – and agreement about – the goals of American medical education, and how far these goals can and should be met by utilizing foreign medical schools.

Needs for Information and Research

In all of these areas the need for information is paramount. For all the research that has been done there is still insufficient understanding of the motivations, expectations, and experiences of foreign medical graduates from which to experiment with potential solutions to the various problems which have developed.

Studies like those by Margulies, while useful in pinpointing the problem of competence, have not gone on to ask why this should be so. The work of Halberstam, Dacso, Antler, and Rusk has been important both in pointing out the deceptiveness of grouping together all foreign medical graduates regardless of specialty or the type of hospital in which they are training, and in taking into account the personal, emotional, and cultural factors involved in quality of performance. Nonetheless they, like Margulies, have been limited by the small size of their samples.

Butter has undertaken pioneer work on the migration patterns of foreign physicians in and out of the United States, utilizing data from American Medical Association records for 1966 and 1968. As she has noted, however, there are certain limitations in the basic data: most significantly, a comparison of the number of registered foreign physicians to the immigration statistics for the period of the study indicated that at least 4,000 physicians were missing.[12] Other valuable studies by Butter and Schaffner and by Knobel on the distributional patterns of foreign physicians are noted in the bibliography and elsewhere in the text. Kelly West's analyses of the role and numerical importance of foreign trained physicians in both this country and their own have shed light on the complex issues involved in any consideration of the "foreign medical graduate." Nevertheless, over and above these and other studies now in progress, there are important information and research gaps which deserve consideration.

Questions for research fall into five distinct but related categories: immigration and emigration; the role and function of foreign medical graduates in the United States; physician

12. Irene Butter, "The Migratory Flow of Doctors To and From the United States," *Medical Care*, 9 (1971), 17-19.

manpower in the United States; physician manpower in countries contributing physicians to the United States; and American nationals in medical school abroad.

I. STUDIES OF IMMIGRATION AND EMIGRATION

The literature on the general phenomenon of the "brain drain" is considerable. One major contribution, which relates physician migration patterns to other patterns of professional migration, is a detailed report sponsored by Education and World Affairs and the Rockefeller Foundation on the international migration of high-level manpower.[13] This factual report focuses specifically on the impact of professional migration on development, factors favoring migration in both developed and developing countries, and studies of particular countries and areas. A series of conference reports, including one on trends in medical education and one on physician migration, has also been published by the Josiah Macy Foundation.[14]

A major opportunity for a cross-professional as well as an international research study of migration appears to have foundered on jurisdictional rivalries between international agencies. Thus, the United Nations Institute for Training and Research (UNITAR) is engaged in five country studies on factors motivating migration from Cameroon, Colombia, Lebanon, the Philippines, and Trinidad and Tabago. UNITAR, in collaboration with Professor William Glaser of Columbia University, is also undertaking a large multinational comparative study with the help of partners in about 20 countries. This latter study does not include physicians, however, apparently because this – being "medical" – falls under the purview of the World Health Organization. The latter organization has shown little interest in developing a parallel study of physicians and nurses, even though these represent perhaps the most significant form of international occupational migration. It is urged that such a study soon be undertaken.

Butter's study of the net flow of physicians to the United States has been noted. Oscar Gish, formerly at the University of Sussex, England, now at the Ministry of Health, Tanzania, has published flow studies of physicians to and from various countries, particularly emphasizing the flow of physicians into Britain from the Commonwealth and Ireland, but also considering the outward flow from Britain to the United States, Canada, and Australia.[15] Nonetheless, a number of specific questions relating to the migration of physicians to the United States remain:

a) In-depth studies are needed of the migration of physicians from selected countries to the United States and their relative rate of return. As this book goes to press, a major analysis of existing data on foreign trained physicians is being launched by Dr. Robert Weiss of Harvard University. This analysis will attempt to match individual names of physicians found on tapes

13. See footnote 3.
14. See footnotes 1 and 6.
15. See Oscar Gish, "Medical Education and the Brain Drain," *British Journal of Medical Education, 3* (1969), 11: "Britain and America: Brain Drains and Brain Gains," *Social Science and Medicine, 3* (1970), 397-98; *Doctor Migration and World Health* (1971).

compiled by different organizations (including the Immigration and Naturalization Service, the AMA, and the ECFMG) in order to provide -- for the first time -- one reliable source of information on migration patterns and activities of foreign trained physicians. If successful, the effort will provide an invaluable milestone in research on foreign medical graduates. As a corollary to this study, efforts should be made to explore the potential use of Immigration and Naturalization Service statistics to evaluate the length of stay and geographical distributions of cohorts of physicians admitted to the United States. This is of particular interest with respect to the experience of exchange visitors.

b) The motivations and expectations of migrating physicians deserve exploration. More needs to be known about the cultural attitudes and career expectations of physicians seeking to visit or emigrate to the United States from selected countries, at the critical time of taking the ECFMG examination. Are they different, and in what ways, from those deciding not to migrate?

c) The process of migration also needs clarification. How do foreign physicians learn about training opportunities in the United States? How does doctor A get to hospital B and not medical center C? Whom does he or she consult in his own country? How is choice of visa determined? Who pays for transportation?

d) Demographic studies are needed of migrants to the United States, including age, stage of career, social background, race, sex -- for example, do women foreign medical graduates come from particular countries rather than others? Do they gravitate to specialties similar to their American trained counterparts? Do they tend to stay in the United States more, or less, than their male colleagues?

e) The role of governmental agencies in the United States with respect to physician migration calls for analysis, including the roles of the Departments of Labor, State, and Health, Education, and Welfare, the Immigration and Naturalization Service, and a variety of private associations and agencies.

f) In all these areas, existing statistical information on migration from available sources is needed on a regular, published basis. The Immigration and Naturalization Service does not publish detailed figures on physicians, although physicians are included in certain occupational tables in the INS annual reports. The National Science Foundation publishes regular reviews of data on physician immigrants from immigration statistics, but these are not at present linked with the equally important statistics for exchange visitors. Data from the American Medical Association give breakdowns of physicians in the United States at one point in time, but do not provide information on the additions or deletions of physicians over a specified time period, and do not include foreign graduates who are unlicensed or do not possess standard ECFMG certificates.

There are thus gaps in basic information.

II. STUDIES OF FOREIGN MEDICAL GRADUATES IN THE UNITED STATES

Such studies are needed to clarify many of the questions raised in previous chapters. These include:

a) the differential location in the United States of foreign trained physicians by country of medical education and by school;

b) analysis of the relationships between performance of foreign medical graduates as measured through standard tests in the United States and variables such as country of medical education, training hospital in the United States, length of training, and type of specialty;

c) perceptions and career expectations of foreign physicians who have come for training in the United States, and how far these match expectations on arrival in the United States;

d) the role of foreign trained physicians in areas where they represent a relatively large proportion of all physicians (e.g., New Jersey). Analysis is clearly needed of the specific recruitment policies of hospitals in these states, and the subsequent utilization and education of the incoming physicians; and how far these match expectations on arrival in the United States;

e) the contribution of foreign medical graduates by specialty, including physicians both in and after graduate training. A brief comparison of the proportional breakdowns for all physicians and for physicians in training suggests that, in general, the greater the proportion of foreign medical graduates in training in a specialty, the greater the proportion in practice in that specialty, but this hypothesis clearly needs to be tested for each specialty, and the specific implications analyzed;

f) analyses of foreign trained physicians working outside regular hospital and medical jobs (e.g., physicians who have not passed the ECFMG examination);

g) licensing of foreign medical graduates, and other aspects of the process of assimilation into the professional medical system of the United States;

h) characteristics of foreign trained physicians who stay in the United States, compared with those who return home.

III. STUDIES OF PHYSICIAN MANPOWER IN DONOR COUNTRIES

Further research is essential to understanding the international implications of migration. Some of the questions are dealt with in the "brain drain" studies previously mentioned. A number of other questions arise:

a) What are the implications of American graduate medical education with respect both to individuals returning home and to manpower patterns in donor countries? Does the United States actually encourage inappropriate staffing patterns in other countries?

b) How do returning physicians use their American education?

c) Are there resources for training in the donor countries equivalent to those available to students from those countries now studying in the United States?

d) What is it in the social and professional structures of some countries (e.g., the Philippines), that they continue to produce more physicians than they can apparently absorb? What types of physician are different countries producing? How far should these factors influence recruitment of these graduates to jobs in the United States?

IV. STUDIES OF AMERICANS IN FOREIGN SCHOOLS

Some studies of American nationals in foreign schools have been remarked upon (see Chapter III). More needs to be known, however, in specific respects:

a) demographic, socioeconomic, and personal characteristics, and educational backgrounds of Americans abroad;

b) the motivations and expectations of American students seeking education abroad (How many would actually prefer American medical schools?);

c) experiences and education in particular schools;

d) subsequent careers, including experiences of assimilation into the American medical system;

e) costs and financing of such training as against similar training in the United States.

V. MANPOWER IN THE UNITED STATES

Finally, but perhaps of greatest long term importance, are the needed studies of physician manpower (American and foreign trained) in the United States:

a) Substantial work needs to be done on the relationship between residency positions offerd and residency positions filled, by both American and foreign graduates, in relation to subsequent practice locations in the United States.

b) Physician manpower models need to be developed, on the basis of various policy assumptions, to provide examples of staffing structures which in turn may lead to numerical guides for the training of physicians in particular areas and specialties.

c) Studies of hospital medical staffing are required, including studies of hospitals which rely on foreign trained physicians for their essential staffing. What do interns and residents do? How far could the tasks be redistributed among attending physicians and nonphysician personnel? What are the differences in staffing arrangements in hospitals of similar function and size, one of which has house staff, the other not? Are there apparent differences in tasks assigned to (and work done by) American trained and foreign trained physicians?

d) The refinement of testing devices and techniques is essential, so that professional competence and performance can

be more precisely measured than at present.

e) Are there patterns of relative competence among foreign medical graduates by country of medical education and type of hospital, in comparison with American trained physicians?

f) How long do foreign graduates stay in house staff positions, and why?

g) The politics of professionalism should be explored in relation to physician manpower development. What are the implications of alternative forms of national health insurance on manpower planning and decision-making?

Again, other questions can be derived from discussions in the text. But the questions presented here form a series of major, intertwined research areas. Some of this projected research is now being undertaken. One of the authors of this volume, for example, is directing a study of the recruitment, expectations, and experiences of a cohort of foreign trained physicians in house staff positions in the United States. Other work in progress has been indicated in the text. Nevertheless, a substantial research effort will be required to elucidate even simple questions as to why, how, and with what results, the graduate of a medical school from abroad comes to the United States.

Pressures for Change

Delineation of areas for action and needed information gives a background for reviewing the foreign medical graduate situation. Action cannot be expected, however, unless agencies exist which are responsive to and which have the authority to make policy and to stimulate change. Of the three influential blocs interested in the flow of foreign trained physicians to the United States — government, professional associations, and hospitals — the greatest impetus for action promises to come from the professional associations. All the major professional associations of American medicine have become vitally interested in questions concerning foreign medical graduates as a part of a widening concern over the graduate education and testing of all physicians.

The underlying pressures for change come, however, from two potent and disparate movements. The first is a growing clamor by foreign governments and international private groups (including groups in the Philippines, India, Thailand, and Korea) over the loss of physicians to the United States. The second stems from economic and professional developments in medical care in the United States — part of the general turmoil over the financing and organization of health services which is encompassed in the much used phrase "health care crisis."

Reimbursement practices under Medicare and Medicaid throw into prominence the equivocal role of house staff as students rather than practitioners and raise questions as to how far their education should be financed by sick patients and insurance funds. Any system which replaces the present financing of interns and residents by a separate system of funding (for

example, through federal grants to individuals in training or to employing hospitals) is bound to consider the role and function of the foreign trained physician. The relatively rapid affiliation of graduate educational programs with medical schools, by emphasizing the lack of general policies toward the education of physicians in terms of specialty and geographical area, promises to stimulate physician manpower reappraisals. Such reappraisals are intrinsic not only to the development of American graduate education, but also to the role of foreign graduates.

At the same time, the stronger federation of specialty certifying boards in the newly-established American Board of Medical Specialties offers a potential vehicle for relating training positions to assessed future manpower needs. Indeed,as this book goes to press, various groups are discussing the development of a strong Liaison Committee on Graduate Medical Education and a Coordinating Council on Medical Education, sponsored by the AMA, the American Board, and other groups. Undoubtedly, these agencies will consider foreign medical graduates in their deliberations. How far they will engage in physician manpower planning remains to be seen.

Behind all these considerations are the joint possibilities of the passage of some form of national health insurance in the United States within the next few years and increased government aid to all aspects of medical education. Both promise to bring federal agencies more closely into the determination of physician manpower planning, education, and financing, although this would almost certainly be done through the utilization of professional agencies or advisory committees. Pressures are building up, then, to extend the role of the professional associations of medicine, as quasi-public agencies, to consider and perhaps ultimately to control, the numbers, distribution, roles, and functions of physicians in training and practice in the United States. At the very least, such promises will bring the role of the foreign trained physician into greater prominence. At the most, policies for the education and supply of foreign trained physicians will be developed side by side with those for American graduates.

In the past, no one agency has been responsible for controlling and monitoring physician migration. Hospitals have had a vested interest in encouraging migration. Congressional attitudes have been isolationist. Government agencies have been enmeshed in the machinery of immigration, rather than in broader international issues, or preoccuppied with support of U.S. educational institutions as sole sources of domestic health manpower.

The predominant initial reaction of the professional associations to the influx of foreign trained physicians was to create basic machinery for examination and certification. The Council on Medical Education of the American Medical Association has, it is true, long been concerned with questions of the relevance of

graduate medical education to foreign trained physicians, and the American Medical Association has provided the primary basic statistics on foreign trained physicians in the United States through the resources of its master file of physicians, its graduate medical education statistics, and its special studies.[16] The Association of American Medical Colleges has also drawn attention to the role of the United States in developing world health manpower resources through papers, conferences, and research sponsored by its Division of International Medical Education, and through its work with various international organizations and the U.S. Agency for International Development.[17] But the professional associations in American medicine have not seen themselves as manpower planning agencies, either for American graduates or for anyone else.

The multi-associational Commission on Foreign Medical Graduates, whose Director, William Sodeman, is also the chairman of the Council on Medical Education of the American Medical Association, provides a potential focus for activity concerning physician migration. The Commission is acting both as a sponsor of research studies and as a pivot for action. For example, as noted, it is in the process of formulating policies concerning visa arrangments and developing orientation sessions. On the informational side, it is particularly interested in determining distributional patterns of foreign medical graduates as a function of measures of competence and in follow-up studies of foreign physicians in the United States, particularly those who have not passed the ECFMG examination.

Up to the present, however, no organization has been willing or able to take to itself the mandatory planning authority which the foreign medical graduate movement is now demanding. The Commission on Foreign Medical Graduates will hopefully become a powerful center for policy development, working with governmental and hospital agencies. By no means least, the scope and implications of physician migration should be brought to the attention of appropriate Congressional committees -- for reconsideration of the open-door policies toward physician migration.

Meanwhile the basic questions remain. Is the United States to capture an ever-increasing supply of the world's physicians -- 10,000 this year, 11,000 the next, 12,000 the year thereafter? Of whom perhaps two-thirds, perhaps more, will remain past any initial training period? One answer is that eventually the United States will produce enough physicians for its own needs. There is, however, a significant difference between theory and practice. The recent Carnegie Report on medical education (1970) estimated that 13,000 foreign medical graduates would enter the United States between 1968 and 1977.[18] In fact, 33,000 foreign medical graduates entered between 1968 and 1971 alone (Appendix Table A2), and there is little sign that the doctor shortage is declining. In the short term, only major changes in health care organization and financing in this country, including

16. See, for example: the *Medical School Alumni* (1967) and *Foreign Medical Graduates in the United States, 1970*, noted in the bibliography (both published by the AMA). The latter publication provides the first detailed demographic information on foreign trained physicians in the United States.

17. The AAMC has also initiated reports and recommendations directly concerning the situation of foreign trained physicians in the United States. A panel report of 1968, for example, underlined many of the concerns enunciated by the National Advisory Commission on Health Manpower in the previous year, and urged further action to develop statistical information on foreign trained physicians, to establish orientation programs for incoming physicians, and to stimulate educational programs in the United States and abroad more closely attuned to the manpower needs of foreign countries.

18. Carnegie Commission on Higher Education, *Higher Education and the Nation's Health. Policies for Medical and Dental Education* (New York, 1970).

physician manpower planning, will have a significant effect on concepts of adequacy.

The areas for domestic action and foreign policy development offer a complex, interdependent pattern of policies for physician migration to the United States. But certain simple assumptions emerge. If the United States uses its own lack of health services and medical manpower planning as an excuse to benefit from the talent of other nations, it must expect criticism from those countries that cannot compete successfully for their own physicians. Even at the minimal level of leaving actions to limit migration entirely to the donor countries, the United States has a responsibility to monitor the progress of foreign trained physicians through the U.S. system, to see that educational programs involve education as well as service, to encourage physicians to return home at the end of training, and to welcome those who do stay by full assimilation into the professional system of medicine.

Appendix: Statistical Tables

A. Immigration and Visa Status

Table A1

PHYSICIANS AND SURGEONS ADMITTED TO THE UNITED STATES AS IMMIGRANTS
Years Ended June 30, 1901 - 1971

Year Ended June 30,	Number Admitted	Year Ended June 30,	Number Admitted
1971	5,756	1935	304
1970	3,158	1934	353
1969	2,756	1933	187
1968	3,128	1932	259
1967	3,326	1931	329
1966	2,552	1930	390
1965	2,012	1929	398
1964	2,249	1928	454
1963	2,093	1927	486
1962	1,797	1926	487
1961	1,683	1925	540
1960	1,574	1924	1,391
1959	1,630	1923	704
1958	1,934	1922	458
1957	1,990	1921	597
1956	1,388	1920	459
1955	1,046	1919	236
1954	1,040	1918	182
1953	845	1917	326
1952	1,210	1916	326
1951	1,388	1915	476
1950	1,878	1914	504
1949	1,141	1913	508
1948	n/a	1912	459
1947	n/a	1911	429
1946	n/a	1910	365
1945	202	1909	332
1944	156	1908	504
1943	218	1907	480
1942	290	1906	725
1941	706	1905	1,043
1940	1,095	1904	907
1939	1,384	1903	343
1938	738	1902	116
1937	533	1901	100
1936	462	Total	69,515

Source: United States Department of Justice, Immigration and Naturalization Service.

Table A2

COMPARISON OF FOREIGN PHYSICIANS ADMITTED TO THE UNITED STATES WITH NUMBER OF U.S. MEDICAL GRADUATES 1962 - 1971

Year Ending June 30	Foreign Physicians			U.S. Graduates
	Immigrants	Exchange Visitors	Total	
1962	1,797	3,970	5,767	7,168
1963	2,093	4,637	6,730	7,264
1964	2,249	4,518	6,767	7,336
1965	2,012	4,160	6,172	7,409
1966	2,552	4,370	6,922	7,574
1967	3,326	5,204	8,530	7,743
1968	3,128	5,701	8,829	7,973
1969	2,756	4,460	7,216	8,059
1970	3,158	5,008	8,166	8,367
1971	5,756	4,784	10,540	8,974
Total	28,827	46,812	75,639	77,867

Source: Figures on immigrants and exchange visitors are from the United States Department of Justice, Immigration and Naturalization Service. Figures of U.S. graduates from "Medical Education in the United States," *Journal of the American Medical Association, 218* (1971), 1221.

Table A3

TEMPORARY WORKERS ADMITTED TO THE U.S. UNDER SECTION 101 (a) (15) (H) and SECTION 101 (a) (15) (J) OF THE IMMIGRATION AND NATIONALITY ACT: PHYSICIANS AND SURGEONS
Fiscal Years 1967 - 1971

Visa Category	1967	1968	1969	1970	1971
Workers of distinguished merit and ability	63	61	62	83	178
Other temporary workers	3	7	20	100	47
Industrial trainees	301	228	217	174	173
Exchange visitors	5,204	5,701	4,460	5,008	4,784
Intercompany transferees†	–	–	–	–	9
Total	5,571	5,997	4,759	5,365	5,191

† Admitted under the Act of April 7, 1970, P.L. 91-225.

Source: United States Department of Justice, Immigration and Naturalization Service.

Table A4

FOREIGN PHYSICIANS AND SURGEONS ADMITTED TO THE UNITED STATES
Fiscal Years 1953 - 1970

Year	Physicians and Surgeons Admitted to the U.S. as Immigrants	Nonimmigrant Physicians and Surgeons Adjusted to Immigrant Status	ExchangeVisitor Physicians and Surgeons Adjusted to Immigrant Status
1953	845	n/a	n/a
1954	1,040	"	"
1955	1,046	"	"
1956	1,388	"	"
1957	1,990	"	"
1958	1,934	"	"
1959	1,630	"	"
1960	1,574	"	"
1961	1,683	"	"
1962	1,797	"	"
1963	2,093	"	"
1964	2,249	"	"
1965	2,012	112	68
1966	2,549	474	347
1967	3,325	841	417
1968	3,060	652	308
1969	2,755	576	333
1970	3,155	890	505

The first column indicates all such immigrants by year since 1953. The second column is the yearly total of all foreign physicians changed from nonimmigrant to immigrant status during each year since 1965, the earliest year for which such data are available. These numbers are also part of the yearly immigrant totals of the first column. The third column shows those changing from exchange visitor – the largest nonimmigrant category – to immigrant status (also since 1965). These numbers are also part of the totals in the first and second columns.

Source: National Science Foundation, from data of the Immigration and Naturalization Service.

Table A5

PHYSICIANS AND SURGEONS ADMITTED TO THE UNITED STATES AS IMMIGRANTS BY BY COUNTRY OR REGION OF LAST PERMANENT RESIDENCE Fiscal Years 1953 - 1971

Fiscal Year	United Kingdom	Other Europe	Canada	Mexico	Cuba	South America	Asia	Other	Total
1953	66	299	130	40	58	•	•	252	845
1954	66	373	116	60	90	•	•	335	1,040
1955	62	417	128	63	92	•	•	284	1,046
1956	76	513	151	93	112	•	•	443	1,388
1957	142	729	256	95	199	228	155	186	1,990
1958	189	592	218	57	86	285	316	191	1,934
1959	147	579	210	44	77	227	207	139	1,630
1960	125	425	245	66	94	256	244	119	1,574
1961	140	413	287	64	94	208	269	208	1,683
1962	119	383	280	70	120	298	265	262	1,797
1963	154	421	467	97	156	327	260	211	2,093
1964	165	458	440	77	229	454	204	222	2,249
1965	147	421	380	110	201	348	205	200	2,012
1966	187	483	393	119	150	355	588	277	2,552
1967	206	596	449	86	162	358	1,175	294	3,326
1968	185	481	314	55	215	345	1,277	256	3,128
1969	140	426	236	32	54	172	1,448	248	2,756
1970	192	436	240	29	52	161	1,744	304	3,158
1971	268	461	474	28	95	269	3,836	325	5,756

Source: United States Department of Justice, Immigration and Naturalization Service.

Table A6

PERCENT DISTRIBUTION OF PHYSICIANS AND SURGEONS ADMITTED TO THE UNITED STATES AS IMMIGRANTS BY COUNTRY OR REGION OF LAST PERMANENT RESIDENCE 1957, 1965, and 1971

Country or Region	Fiscal Year		
	1957	1965	1971
Asia	7.8	10.2	66 [illegible]
Canada	12.9	18.9	8.2
Cuba	10.0	10.0	1.7
Mexico	4.8	5.5	0.5
South America	11.5	17.3	4.7
United Kingdom	7.1	7.3	4.7
Other Europe	36.6	20.9	8.0
Other	9.3	9.9	5.6
Total	100.0	100.0	100.0
Number	1,990	2,012	5,756

Source: Appendix Table A5.

Table A7

IMMIGRANTS AND EXCHANGE VISITORS ALL OCCUPATIONS AND PHYSICIANS BY MAJOR REGION OF ORIGIN Fiscal Year 1971

Geographical Region	Total		Physicians	
	Number	Percent	Number	Percent
IMMIGRANTS				
Africa	5,844	1.6	168	2.9
Asia	97,196	26.2	3,836	66.6
Europe	92,375	24.9	729	12.7
North America	149,002	40.2	728	12.6
South America	22,678	6.1	269	4.7
Oceania	3,383	0.9	26	0.5
Total	370,478	100.0	5,756	100.0
EXCHANGE VISITORS				
Africa	2,808	5.3	143	3.0
Asia	12,622	23.6	2,226	46.5
Europe	26,537	49.7	934	19.5
North America	3,901	7.3	874	18.3
South America	6,182	11.6	549	11.5
Oceania	1,343	2.5	58	1.2
Total	53,393	100.0	4,783	100.0

Source: United States Department of Justice, Immigration and Naturalization Service.

Table A8

MIGRATION OF PHYSICIANS FROM SELECTED COUNTRIES
Fiscal Year 1971

Country	Immigrants	Exchange Visitors	Total
Argentina	45	125	170
Brazil	17	103	120
Canada	474	311	785
Germany	62	183	245
India	821	692	1,513
Iran	251	150	401
Jamaica	21	205	226
Japan	31	189	220
Korea	965	38	1,003
Mexico	28	183	211
Pakistan	104	162	266
Peru	20	106	126
Philippines	980	385	1,365
Taiwan	199	41	240
Thailand	91	213	304
United Kingdom	268	157	425

Source: United States Department of Justice, Immigration and Naturalization Service.

Table A9

FOREIGN COUNTRIES CONTRIBUTING GREATEST NUMBER OF GRADUATES TO U.S. GRADUATE PROGRAMS December 31, 1970

Country	Rank Order	Number of Trainees	Percent of Total Number of Trained in U.S.
Argentina	11	413	2.4
Formosa	6	627	3.7
Germany	9	419	2.4
India	2	2,525	15.0
Iran	5	762	4.5
Korea	3	1,309	7.8
Mexico	10	414	2.4
Pakistan	7	519	3.0
Philippines	1	3,003	17.8
Spain	8	477	2.8
Thailand	4	837	4.9
Total		11,305	66.7

Source: "Graduate Medical Education," *Journal of the American Medical Association, 218* (1971), 1246.

Table A10

FOREIGN MEDICAL GRADUATES IN THE UNITED STATES BY GEOGRAPHICAL REGION OF GRADUATION December 31, 1970

Geographical Region	Foreign Medical Graduates	
	Number	Percent
Africa	1,126	1.8
Asia	21,002	33.1
Europe	24,756	39.1
North America (Canada)	6,174	9.7
Latin America	9,929	15.7
Oceania	404	0.6
Total	63,391	100.0

Source: J. N. Haug, B. D. Martin, *Foreign Medical Graduates in the United States, 1970*, pp. 5, 15.

Table A11

INTERNATIONAL EXCHANGE IN MEDICAL EDUCATION 1954 - 55 through 1969 - 70

Year	Number of U.S. Students Studying Abroad	Number of Foreign Students in U.S. Schools
1954 - 55	1,730	619
1955 - 56	2,056	760
1956 - 57	n/a	1,087
1957 - 58	n/a	985
1958 - 59	n/a	1,154
1959 - 60	2,896	1,048
1960 - 61	2,832	1,196
1961 - 62	2,097	1,033
1962 - 63	1,929	1,208
1963 - 64	1,872	1,376
1964 - 65	2,215	1,223
1965 - 66	2,377	667
1966 - 67	2,325	1,136
1967 - 68	2,626	999
1968 - 69	3,022	951
1969 - 70	3,368	1,134

Source: Institute of International Education.

Table A12

FOREIGN MEDICAL GRADUATES IN THE UNITED STATES BY COUNTRY OF GRADUATION AND COUNTRY OF BIRTH†
December 31, 1970

Country of Graduation	Total	Country of Birth		
		U.S. Born	Not U.S. Born	Unknown
Total	52,217	5,972	50,927	318
Afghanistan	19	0	19	0
Algeria	1	0	1	0
Argentina	1,313	4	1,305	4
Australia	325	18	305	2
Austria	1,698	194	1,486	18
Belgium	511	208	301	2
Bolivia	146	0	146	0
Brazil	377	4	371	2
Bulgaria	49	0	49	0
Burma	98	0	98	0
Ceylon	93	0	92	1
Chile	176	7	169	0
China	589	18	567	4
Columbia	952	4	945	3
Congo (Kinshasa)	1	0	1	0
Costa Rica	11	1	10	0
Cuba	2,757	25	2,725	7
Czechoslovakia	554	10	635	9
Denmark	82	3	79	0
Dominican Republic	629	18	609	2
East Germany	745	53	682	10
Ecuador	147	0	147	0
El Salvador	91	0	89	2
Ethiopia	1	0	1	0
Finland	31	2	29	0
France	685	115	564	6
Greece	813	41	768	4
Guatemala	109	0	107	2
Haiti	329	2	326	1
Honduras	49	0	49	0
Hong Kong	105	0	105	0
Hungary	862	21	830	11
Iceland	42	1	41	0
India	3,957	0	3,934	23
Indonesia	89	0	89	0
Iran	1,631	0	1,628	3
Iraq	188	0	188	0
Ireland	924	151	766	7
Israel	214	3	208	3
Italy	3,208	1,375	1,810	23
Jamaica	46	2	43	1
Japan	882	29	848	5
Lebanon	615	36	578	1
Malaysia	1	0	1	0

Table A12
(Continued)

FOREIGN MEDICAL GRADUATES IN THE UNITED STATES BY COUNTRY OF GRADUATION AND COUNTRY OF BIRTH† December 31, 1970

Country of Graduation	Total	Country of Birth		
		U.S. Born	Not U.S. Born	Unknown
Malta	6	0	6	0
Mexico	1,821	413	1,395	13
Netherlands	726	232	490	4
New Zealand	79	0	78	1
Nicaragua	78	0	77	1
Nigeria	24	0	24	0
North Korea	5	0	5	0
North Vietnam	3	0	3	0
Norway	44	2	42	0
Pakistan	784	0	783	1
Panama	23	1	21	1
Paraguay	76	0	76	0
Peru	618	2	614	2
Philippines	7,352	28	7,306	18
Poland	602	9	590	3
Portugal	107	10	96	1
Rhodesia	1	1	0	0
Romania	317	5	306	6
Senegal	1	0	1	0
Singapore	23	0	22	1
South Africa	356	6	347	3
South Korea	2,095	1	2,093	1
South Vietnam	12	0	12	0
Spain	1,801	622	1,167	10
Sudan	2	0	2	0
Surinan	2	0	2	0
Sweden	54	2	51	1
Switzerland	2,510	1,338	1,155	17
Syria	173	0	173	0
Taiwan (Formosa)	976	3	970	3
Thailand	1,098	1	1,095	2
Turkey	866	1	863	2
Uganda	7	0	7	0
Union of Sov. Soc. Republics	871	16	845	10
United Arab Republic (Egypt)	732	1	728	3
United Kingdom	1,641	667	1,938	36
Uruguay	46	0	46	0
Venezuela	133	2	130	1
West Germany	3,502	253	3,233	16
Yugoslavia	405	11	391	3

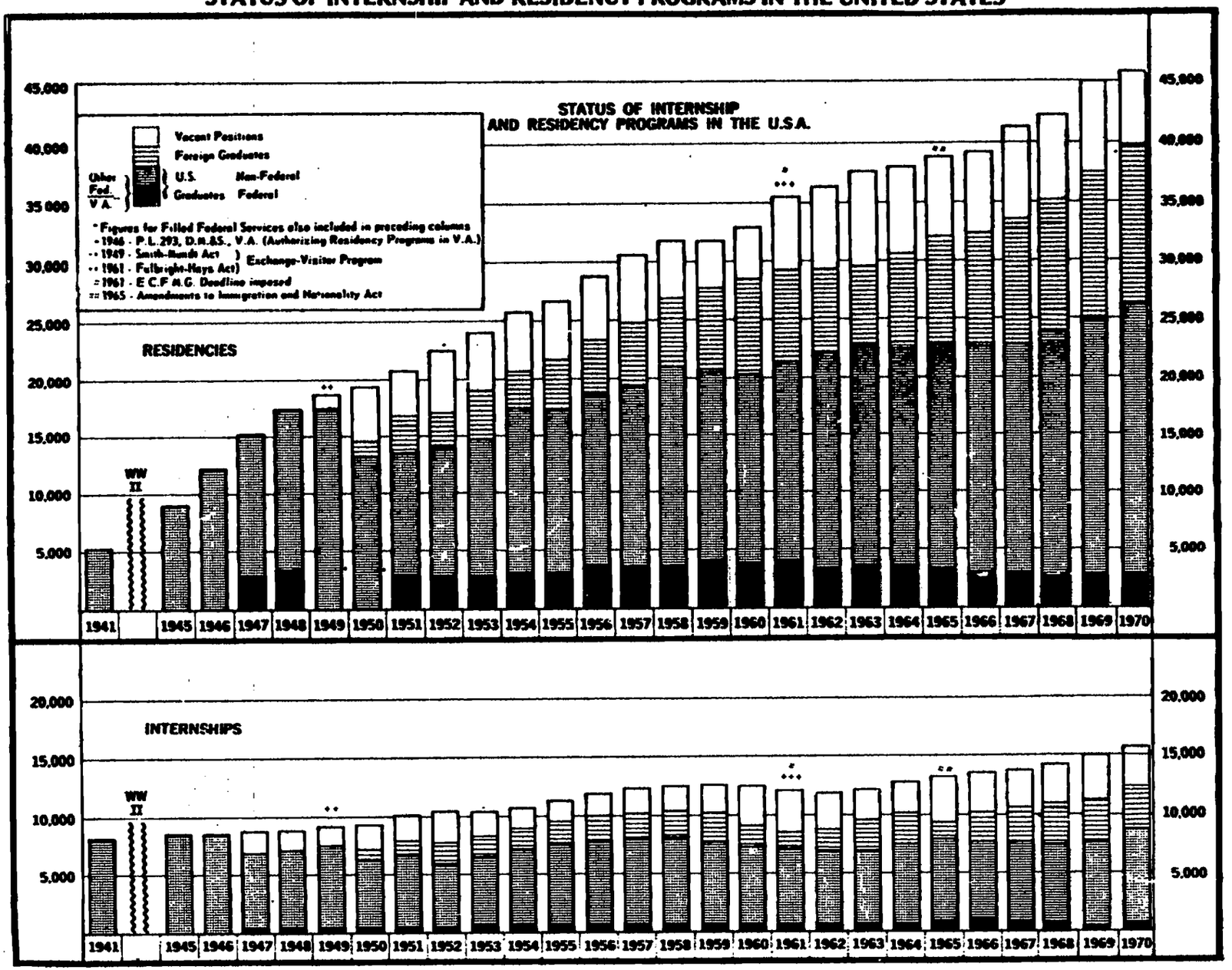
† Excludes Canadian medical graduates in the U.S.

Source: J. N. Haug, B. C. Martin, *Foreign Medical Graduates in the United States*, 1970, pp. 292 - 93.

B. Foreign medical graduates in graduate educational positions in the United States.

Table B1

STATUS OF INTERNSHIP AND RESIDENCY PROGRAMS IN THE UNITED STATES



Source: "Graduate Medical Education," *Journal of the American Medical Association, 218* (1971), 1245.

Table B2

FOREIGN MEDICAL GRADUATES IN GRADUATE TRAINING PROGRAMS IN THE UNITED STATES 1950 - 51 to 1970 - 71

Year	Interns		Residents		Other Graduate Trainees		Total	
	Number	Percent of Filled Positions	Number	Percent of Filled Positions	Number	Percent of Filled Positions	Number	Percent of Filled Positions
1950 - 51	722	19	1,350	9	-	-	2,072	10
1951 - 52	1,116	14	2,233	14	-	-	3,349	14
1952 - 53	1,353	18	3,655	18	-	-	4,388	18
1953 - 54	1,787	22	3,802	20	-	-	5,589	21
1954 - 55	1,761	19	3,275	16	-	-	5,036	17
1955 - 56	1,859	19	4,174	19	-	-	6,033	19
1956 - 57	1,988	20	4,753	21	-	-	6,741	20
1957 - 58	2,079	20	5,543	22	-	-	7,622	22
1958 - 59	2,315	22	6,042	23	-	-	8,357	23
1959 - 60	2,545	25	6,912	15	-	-	9,457	25
1960 - 61[1]	1,753	19	8,182	29	-	-	9,935	26
1961 - 62	1,273	16	7,723	26	-	-	8,996	24
1962 - 63	1,669	19	7,062	24	1,024	35	9,775	24
1963 - 64	2,566	27	7,052	24	1,791	40	11,409	26
1964 - 65	2,821	28	8,155	26	1,925	39	12,899	28
1965 - 66[2]	2,361	24	9,133	29	2,355	41	13,829	29
1966 - 67	2,793	27	9,502	30	2,566	41	14,864	31
1967 - 68	2,913	28	10,627	31	3,077	43	16,617	32
1968 - 69	3,270	31	11,231	32	4,046	50	18,547	35
1969 - 70	2,939	27	12,126	33	3,220	n/a	18,285	n/a
1970 - 71	3,339	29	12,968	33	3,331	43	19,638	33

Excludes graduates of Canadian medical schools; excludes American graduates of foreign schools.

1 ECFMG deadline imposed.

2 Amendments to Immigration and Nationality Act.

Source: American Medical Association *Directory of Internships and Residencies*, selected years.

Table B3

PERCENTAGE OF FOREIGN GRADUATES IN FILLED HOSPITAL RESIDENCY POSITIONS BY SPECIALTY 1963 - 1970†

Specialty	Percentage of foreign graduates in filled positions as of September 1.						
	1963	1964	1965	1966	1967	1968	1970
Anesthesiology	38	39	46	50	50	50	52
Colon and Rectal Surgery	50	47	64	67	61	55	55
Dermatology	11	13	12	11	10	9	12
Family Practice	.	.	.	.	.	.	11
General Practice	52	63	66	67	65	55	69
Internal Medicine	23	25	28	30	34	35	35
Neurological Surgery	16	18	17	17	21	22	24
Neurology	22	24	24	27	28	26	29
Obstetrics and Gynecology	22	25	27	30	33	37	40
Ophthalmology	8	10	9	9	8	7	8
Orthopedic Surgery	11	12	13	13	15	12	11
Otolaryngology	11	14	12	12	11	12	14
Pathology	34	37	40	42	46	48	54
Pediatrics	33	37	41	39	39	42	42
Pediatric Allergy	26	22	35	31	25	22	38
Pediatric Cardiology	36	49	54	52	65	53	54
Physical Medicine	30	35	44	44	50	40	62
Plastic Surgery	13	27	21	16	24	22	20
Psychiatry	24	25	27	27	29	29	28
Psychiatry-Child	17	19	23	22	21	19	24
Radiology	17	17	18	18	20	20	19
Surgery	27	30	32	35	36	37	39
Thoracic Surgery	30	37	38	38	43	44	39
Urology	16	19	23	24	24	25	28
Total	24	26	29	30	32	32	33
Total Number of Foreign Residents	7,052	8,140	9,113	9,483	10,605	11,201	12,943

† This table includes residents in hospital positions only. In 1970, for example, there were another 25 foreign graduates in residencies outside hospitals (e.g., Public Health). 1969 figures are not available.

Source: "Graduate Medical Education in the United States," *Journal of the American Medical Association*, Educational Numbers.

Table B4

NUMBER OF FIRST-YEAR RESIDENCIES, BY SPECIALTY IN AFFILIATED AND NONAFFILATED HOSPITALS
September 1968

Specialty	Number of Approved Programs	Number of Residencies				Number of Residents on Duty			
		Total Positions Offered Sept. 1, 1968	Total Positions Filled Sept. 1, 1968	Positions Vacant Sept. 1, 1968	Percentage Filled Sept. 1, 1968	Graduates U.S. & Canada Sept. 1, 1968	Foreign Graduates Sept. 1, 1968	Percentage Foreign Graduates in Filled Positions	Total Positions Offered 1970 - 1971
AFFILIATED									
Anesthesiology	148	731	592	129	82	331	261	44	712
Colon and Rectal Surgery	10	10	6	4	60	2	4	67	15
Dermatology	73	167	156	11	93	136	20	13	177
General Practice	45	119	69	50	58	52	17	25	122
Internal Medicine	273	2,262	2,048	214	91	1,592	456	22	2,417
Neurological Surgery	78	120	111	9	93	86	25	23	111
Neurology	88	273	232	41	85	178	54	23	299
Obstetrics and Gynecology	215	627	546	81	87	358	188	34	652
Ophthalmology	129	372	362	10	97	337	25	7	368
Orthopedic Surgery	171	349	327	22	94	296	31	9	412
Otolaryngology	93	196	180	16	92	158	22	12	204
Pathology	339	716	482	234	67	260	222	46	704
Pediatrics	181	946	827	119	87	536	291	35	953
Pediatric Allergy	39	46	39	7	85	32	7	18	46
Pediatric Cardiology	52	68	54	14	79	30	24	44	70
Physical Medicine	57	149	94	55	63	61	33	35	150
Plastic Surgery	62	89	82	7	92	67	15	18	99
Psychiatry	171	1,191	937	254	79	697	240	26	1,244
Psychiatry - Child	82	151	99	52	66	83	16	16	154
Radiology	189	789	724	65	92	600	124	17	774
Surgery	305	1,861	1,704	157	92	1,312	392	23	1,887
Thoracic Surgery	76	126	108	18	86	64	44	41	15
Urology	140	210	184	25	88	141	43	23	217
Totals	3,016	11,558	9,963	1,595	88	7,409	2,554	26	11,802
NON AFFILIATED									
Anesthesiology	45	125	85	40	68	18	67	79	121
Colon and Rectal Surgery	4	4	0	4	0	0	0	0	4
Dermatology	6	12	10	2	83	9	1	10	13
General Practice	109	358	187	171	52	64	123	66	360
Internal Medicine	146	623	541	82	87	209	332	61	633
Neurological Surgery	8	9	8	1	87	7	1	13	11
Neurology	6	20	17	3	85	12	5	29	17
Obstetrics and Gynecology	143	252	213	39	85	75	138	65	260
Ophthalmology	30	59	56	3	95	49	7	13	60
Orthopedic Surgery	63	94	76	18	81	69	16	21	85
Otolaryngology	43	30	26	4	87	20	6	23	31
Pathology	300	393	170	214	46	42	137	77	361
Pediatrics	79	215	175	40	81	60	115	66	224
Pediatric Allergy	2	3	2	1	67	1	1	50	3
Pediatric Cardiology	1	1	1	0	100	0	1	100	1
Physical Medicine	3	12	1	11	8	1	0	0	18

Table B4
(Continued)

NUMBER OF FIRST-YEAR RESIDENCIES, BY SPECIALTY IN AFFILIATED AND NONAFFILATED HOSPITALS
September 1968

Specialty	Number of Approved Programs	Number of Residencies				Number of Residents on Duty			
		Total Positions Offered Sept. 1, 1968	Total Positions Filled Sept. 1, 1968	Positions Vacant Sept. 1, 1968	Percentage Filled Sept. 1, 1968	Graduates U.S. & Canada Sept. 1, 1968	Foreign Graduates Sept. 1, 1968	Percentage Foreign Graduates in Filled Positions	Total Positions Offered 1970 - 1971
Plastic Surgery	11	9	8	1	89	6	2	25	12
Psychiatry	89	466	272	194	58	131	141	52	467
Psychiatry - Child	35	40	19	21	47	16	3	16	32
Radiology	83	152	125	27	82	87	38	30	169
Surgery	265	857	690	167	81	268	422	61	888
Thoracic Surgery	17	29	29	0	100	10	19	66	29
Urology	39	44	38	0	85	19	19	50	43
Totals	1,504	3,807	2,758	1,015	72	1,164	1,594	58	3,844
Grand Totals	4,513	15,365	12,721	2,640	83	8,573	4,148	33	15,846

Source: *Directory of Approved Internships and Residencies, 1969-1970*, Table 11A, p. 10.

Table B5 (i)

FOREIGN MEDICAL GRADUATES† SERVING AS HOUSE STAFF IN U.S. HOSPITALS BY MEDICAL SCHOOL AFFILIATION AND SIZE OF HOSPITAL 1960

Affiliation and Size of Hospital	Total Filled Positions	Filled by Foreign Graduates	Percent Filled by Foreign Graduates
Affiliated hospitals:			
Total	20,609	3,402	17
Less than 200 beds	764	179	23
200 - 299	1,864	442	24
300 - 499	4,425	829	19
500 and over	13,556	1,952	14
Nonaffiliated hospitals:			
Total	15,829	6,055	38
Less than 200 beds	1,662	914	55
200 - 299	3,314	1,869	56
300 - 499	5,503	2,059	37
500 and over	5,350	1,213	23

† Includes graduates of Canadian medical schools; excludes American graduates of foreign schools.

Source: William H. Stewart, Marion E. Altenderfer, *Health Manpower Source Book, Hospital House Staffs*, Public Health Service Publication No. 263, Section 13 (1961).

Table B5 (ii)

FOREIGN MEDICAL GRADUATES SERVING AS HOUSE STAFF† IN U.S. HOSPITALS BY MEDICAL SCHOOL AFFILIATION AND SIZE OF HOSPITAL 1970

Affiliation and Size of Hospitals	Total Filled Positions	Filled by Foreign Graduates	Percent Filled by Foreign Graduates
Affiliated hospitals:			
Total:	43,048	11,587	27
Combined hospitals	14,669	3,125	21
Less than 200 beds	2,374	420	18
200 - 299	1,375	530	39
300 - 499	6,815	2,589	38
500 and over	17,815	4,923	28
Nonaffiliated hospitals:			
Total	7,724	4,695	61
Combined hospitals	938	629	67
Less than 200 beds	512	265	52
200 - 299	1,167	789	68
300 - 499	2,208	1,547	70
500 and over	2,899	1,465	51

† Interns and residents.

Source: "Graduate Medical Education," *Journal of the American Medical Association, 218* (1971), 1231, 1238.

Table B6

FOREIGN RESIDENTS IN AFFILIATED AND NONAFFILIATED HOSPITALS 1963 - 1970

Year	Affiliated Hospitals	Non affiliated Hospitals	Total
	NUMBER		
1963	2,910	4,142	7,052
1964	3,046	5,094	8,140
1965	4,565	4,548	9,113
1966	4,911	4,572	9,483
1967	6,292	4,313	10,605
1968	7,217	3,984	11,201
1969	n/a	–	–
1970	9,751	3,192	12,943
	PERCENT		
1963	41.3	58.7	100.0
1964	37.4	62.6	100.0
1965	50.1	49.9	100.0
1966	51.8	48.2	100.0
1967	59.3	40.7	100.0
1968	64.4	35.6	100.0
1969	n/a	–	–
1970	75.3	24.7	100.0

Source: American Medical Association *Directory of Approved Internships and Residencies*, selected years.

Table B7

UNITED STATES AND CANADIAN MEDICAL GRADUATES AS A PROPORTION OF INTERNSHIP AND RESIDENCY POSITIONS OFFERED 1950 - 1971

Year	Internships			Residencies		
	Number Offered	Number Filled by U.S. and Canadian Graduates	Percent Filled by U.S. and Canadian Graduates	Number Offered	Number Filled by U.S. and Canadian Graduates	Percent Filled by U.S. and Canadian Graduates
1950 - 51	9,370	6,308	67.3	19,364	13,145	67.9
1951 - 52	10,044	6,750	67.2	20,645	13,618	66.0
1952 - 53	10,548	6,292	59.7	22,292	13,832	62.0
1953 - 54	10,542	6,488	61.5	23,630	14,817	62.7
1954 - 55	11,048	7,305	66.1	25,486	17,219	67.6
1955 - 56	11,616	7,744	66.7	26,516	17.251	65.1
1956 - 57	11,895	7,905	66.5	28,528	18,259	64.0
1957 - 58	12,325	8,119	65.9	30,595	19,433	63.5
1958 - 59	12,469	8,037	64.5	31,818	20,716	65.1
1959 - 60	12,580	7,708	61.3	31,733	20,619	65.0
1960 - 61	12,547	7,362	58.7	32,786	20,265	61.8
1961 - 62	12,074	6,900	57.1	35,403	21,914	61.9
1962 - 63	12,024	7,136	59.3	36,502	22.177	60.8
1963 - 64	12,229	7.070	57.8	37,357	22,433	60.1
1964 - 65	12,728	7,176	57.2	38,750	22,852	59.0
1965 - 66	12,954	7,309	56.4	38,979	22,765	58.4
1966 - 67	13,569	7,573	55.8	39,384	22,548	57.3
1967 - 68	13,761	7,506	54,5	41,695	23,116	55.4
1968 - 69	14,112	7,194	51.0	42,633	23,816	55.9
1969 - 70	15,003	7,869	52.4	45,351	25,013	55.2
1970 - 71	15,354	8,213	53.5	46,584	26,495	56.9

Source: Calculated from "Graduate Medical Education," *Journal of the American Medical Association, 218* (1971), 1244, Table 25.

Table B8

FOREIGN MEDICAL GRADUATES AS PERCENTAGE OF HOUSE STAFFS IN INDIVIDUAL HOSPITALS 1967

Hospitals	Internships		Residencies	
	Number of Hospitals	Percent	Number of Hospitals	Percent
Hospitals with 0 - 25% FMGs	368	52	423	43
Hospitals with 26 - 50% FMGs	49	7	151	15
Hospitals with 51 - 75% FMGs	33	5	105	11
Hospitals with 76 - 100% FMGs	254	36	311	31
Total Reporting	704	100	990	100

Source: From American Medical Association, *Directory of Approved Internships and Residencies 1968 - 69*, Table 14, p. 26.

Table B9

PARTICIPATION OF FOREIGN MEDICAL GRADUATES† IN NATIONAL INTERN AND RESIDENT MATCHING PROGRAM 1955 - 1971

Year	Total Number Participating	Total Number Matched	Percent Unmatched
1955	66	43	34.8
1956	218	156	28.4
1957	271	162	40.2
1958	376	224	40.4
1959	4	4	0
1960	82	71	13.4
1961	85	73	14.1
1962	108	99	8.3
1963	118	105	11.0
1964	194	169	12.5
1965	313	276	11.8
1966	406	354	12.8
1967	428	386	9.8
1968	449	411	8.4
1969	487	424	12.9
1970	285	243	14.7
1971	353	301	14.7

† On the establishment of the Educational Council for Foreign Medical Graduates, the National Intern Matching Program required proof of passage of the ECFMG examination before candidates are allowed to register.

Source: ECFMG *Annual Report 1970*, Table 7.

Table B10

NUMBER OF RESIDENCIES BY CENSUS REGION AND STATE
September 1970

Census Division, Region, and State	Number of Hospitals	Number of Approved Programs	Number of Residencies: Total Positions Offered Sept 1, 1970	Number of Residencies: Total Positions Filled Sept 1, 1970	Number of Residencies: Positions Vacant Sept 1, 1970	Number of Residencies: Percentage Filled	Number of Residents on Duty: Grads., U.S. Canada Sept 1, 1970	Number of Residents on Duty: Foreign Graduates Sept 1, 1970	Number of Residents on Duty: Percentage Foreign Graduates in Filled Positions	Number of Residents on Duty: Total Residency Positions Offered 1972-1973
NORTHEAST										
New England:										
Connecticut	32	105	842	708	134	84	365	343	48	1,003
Maine	3	11	51	31	20	61	26	5	16	53
Massachusetts	77	185	1,981	1,817	164	92	1,263	554	30	2,226
New Hampshire	3	11	85	68	17	80	59	9	13	90
Rhode Island	14	25	199	154	45	77	62	92	60	203
Vermont	2	14	131	112	19	85	103	9	8	128
Totals.	131	351	3,289	2,890	399	88	1,878	1,012	35	3,703
Middle Atlantic:										
New Jersey	62	142	972	776	196	80	170	606	78	1,219
New York	201	685	8,189	7,475	714	91	3,585	3,890	52	8,724
Pennsylvania	111	364	3,042	2,477	565	81	1,697	780	31	3,315
Totals.	374	1,191	12,203	10,728	1,475	88	5,452	5,276	49	13,258
NORTH CENTRAL										
East North Central:										
Illinois	52	242	2,598	2,213	374	86	1,132	1,081	49	2,781
Indiana	19	51	492	366	126	74	310	66	15	560
Michigan	66	192	1,072	1,714	358	83	922	792	46	2,299
Ohio	82	263	2,549	2,109	440	83	1,121	988	47	1,709
Wisconsin	27	70	709	567	142	80	455	112	20	765
Totals.	256	818	8,409	6,969	1,440	83	3,940	3,029	43	9,114
West North Central:										
Iowa	13	29	360	321	39	89	238	83	26	378
Kansas	17	37	457	315	141	69	225	91	29	480
Minnesota	23	71	1,404	1,276	128	91	1,021	255	20	1,479
Missouri	42	121	1,237	1,000	237	81	669	331	33	1,384
Nebraska	16	30	239	156	83	65	146	10	6	298
North Dakota	7	4	12	7	5	58	4	3	43	12
South Dakota	3	3	11	7	4	64	6	1	14	14
Totals.	121	295	3,720	3,083	637	83	2,609	774	25	4,045
SOUTH										
South Atlantic:										
Delaware	4	10	81	56	25	69	19	37	66	92
District of Columbia	23	96	1,065	999	106	90	634	325	34	1,198
Florida	35	91	1,004	917	87	91	641	276	30	1,112
Georgia	21	64	722	491	231	68	422	69	14	744
Maryland	38	135	1,286	1,161	125	90	660	501	43	1,385
North Carolina	24	81	818	723	95	88	645	78	11	901
South Carolina	11	32	313	205	108	65	185	20	10	360
Virginia	36	94	793	663	130	84	533	130	20	908
West Virginia	13	36	222	139	83	63	77	62	45	249
Totals.	205	639	6,304	5,314	990	84	3,816	1,498	28	6,949

Table B10
(Continued)

NUMBER OF RESIDENCIES BY CENSUS REGION AND STATE
September 1970

Census Division, Region, and State	Number of Hospitals	Number of Approved Programs	Number of Residencies: Total Positions Offered Sept 1, 1970	Number of Residencies: Total Positions Filled Sept 1, 1970	Number of Residencies: Positions Vacant Sept 1, 1970	Number of Residencies: Percentage Filled	Number of Residents on Duty: Grads., U.S. Canada Sept 1, 1970	Number of Residents on Duty: Foreign Graduates Sept 1, 1970	Number of Residents on Duty: Percentage Foreign Graduates in Filled Positions	Number of Residents on Duty: Total Residency Positions Offered 1972 - 1973
East South Central:										
Alabama	13	44	410	309	101	75	69	40	13	424
Kentucky	22	47	392	286	106	73	223	63	22	463
Mississippi	8	22	194	143	51	74	132	11	8	199
Tennessee	31	88	813	632	181	78	537	95	15	867
Totals	74	201	1,809	1,370	439	76	1,161	209	15	1,953
West South Central:										
Arkansas	7	25	177	138	39	78	126	12	9	276
Louisiana	24	75	759	636	123	84	544	92	14	805
Oklahoma	19	36	319	234	85	73	217	17	7	368
Texas	60	187	1,871	1,579	292	84	1,294	285	18	2,120
Totals	110	323	3,236	2,587	539	83	2,181	406	16	3,569
WEST										
Mountain:										
Arizona	18	36	269	189	80	70	118	71	38	339
Colorado	20	80	638	597	41	94	551	46	8	708
Nevada	1	1	2	1	1	50	-	1	100	2
New Mexico	10	18	164	137	27	84	107	30	22	165
Utah	11	27	201	181	20	90	167	14	8	230
Totals	60	162	1,274	1,105	169	87	943	162	15	1,444
Pacific:										
Alaska	1	-	-	-	-	-	-	-	-	
California	131	446	4,407	3,957	450	90	3,689	268	7	5,806
Hawaii	11	18	149	138	11	93	107	31	22	180
Oregon	9	37	301	257	44	85	220	37	14	333
Washington	18	46	529	478	51	90	433	45	9	545
Totals	170	547	5,386	4,830	556	90	4,449	381	8	6,364
POSSESSIONS										
Territories & Possessions:										
Canal Zone	1	8	32	28	4	88	20	8	29	33
Puerto Rico	15	41	453	316	137	70	128	188	59	516
Totals	16	49	485	344	141	71	148	196	57	549
Grand Totals	1,517	4,576	4,576	46,005	39,220	6,785	26,277	12,943	33	50,948

Source: "Graduate Medical Education," *Journal of the American Medical Association, 218* (1971), 1239.

Table B11

WOMEN IN GRADUATE MEDICAL EDUCATION BY COUNTRY OF MEDICAL EDUCATION September 1970

Medical Education	United States and Canadian	Foreign Medical Graduates	Total Graduates
Interns	724	648	1,372
Residents	1,778	2,151	3,929
Total.	2,502	2,799	5,301
Total Interns and Residents. . . . . (Men and Women)	34,708	16,307	51,015

Source: "Special Studies in Graduate Medical Education," *Journal of the American Medical Association, 218* (1971), 1250.

Table B12

NEGRO U.S. CITIZENS SERVING IN INTERNSHIP AND RESIDENCY PROGRAMS BY COUNTRY OF GRADUATION September 1970

	Negro U.S. Citizens		
Medical Program	United States and Canadian Graduates	Foreign Medical Graduates	Total
Interns	170	80	250
Residents	462	280	742
Total.	632	360	992
Total Interns and Residents.	34,708	16,307	51,015

Source: "Special Studies in Graduate Medical Education," *Journal of the American Medical Association, 218* (1971), 1248.

C. Examining and licensing of foreign medical graduates in the United States.

TABLE C1

ECFMG EXAMINATION CENTERS

U.S. and Canadian Centers

UNITED STATES
California, Los Angeles
San Francisco
Colorado, Denver
Connecticut, New Haven
District of Columbia, Washington
Florida, Gainesville
Miami
Georgia, Atlanta
Hawaii, Honolulu
Illinois, Chicago (North)
Chicago (West)
Chicago (South)
Kansas, Kansas City
Kentucky, Louisville
Louisiana, New Orleans
Maryland, Baltimore
Michigan, Ann Arbor
Minnesota, Minneapolis
Missouri, St. Louis
Nebraska, Omaha
New Jersey, Newark
New York, Albany
Buffalo
New York City
Rochester
Syracuse
North Carolina, Durham
Ohio, Cincinnati
Cleveland
Oklahoma, Oklahoma City
Pennsylvania, Philadelphia
Pittsburgh
Tennessee, Nashville
Texas, Dallas
El Paso
Houston
Virginia, Richmond
Washington, Seattle
Wisconsin, Milwaukee
Puerto Rico, San Juan
Guam

CANADA
Montreal, Quebec
St. John's, Newfoundland
Toronto, Ontario
Winnipeg, Manitoba

Foreign Centers

LATIN AMERICA
Argentina, Buenos Aires
Cordoba
Barbados, Bridgetown
Bolivia, La Paz
Brazil, Belem
Brasilia
Curitiba
Porto Alegre
Recife
Rio de Janeiro
Salvador
Sao Paulo
British Guiana, Georgetown
Chile, Santiago
Columbia, Barranquilla
Bogota
Cali
Medellin
Costa Rica, San Jose
Dominican Republic,
Santo Domingo
Ecuador, Quito
El Salvador, San Salvador
Guatemala, Guatemala City
Haiti, Port-au-Prince
Honduras, Tegucigalpa
Jamaica, Kingston
Mexico, Guadalajara
Mexico, DF
Monterrey
San Luis Potosi
Netherlands Antilles, Curacao
Nicaragua, Managua
Panama, Panama City
Paraguay, Asuncion
Peru, Lima
Trinidad, Port-of-Spain
Uruguay, Montevideo
Venezuela, Caracas

NEAR AND MIDDLE EAST
Afghanistan, Kabul†
Cyprus, Nicosia
Iran, Isfahan
Shiraz
Teheran
Israel, Tel Aviv
Jordan, Amman
Lebanon, Beirut
Pakistan, Dacca
Karachi
Lahore
Saudi Arabia, Dhahran
Jidda
Turkey, Ankara
Istanbul

EUROPE
Austria, Vienna
Belgium, Brussels
Czechoslovakia, Prague
Denmark, Copenhagen
Finland, Helsinki
France, Paris
Germany, Berlin
Bonn
Frankfurt
Munich
Greece, Athens
Hungary, Budapest†
Iceland, Reyk javik
Ireland, Dublin
Italy, Bologna
Rome
Netherlands, The Hague
Poland, Warsaw
Portugal, Lisbon
Rumania, Bucharest†
Spain, Barcelona
Madrid
Switzerland, Bern
Geneva
United Kingdom,
Edinburgh
Liverpool
London
Yugoslavia, Belgrade

FAR EAST
Burma, Rangoon†
Ceylon, Colombo
Hong Kong
Indonesia, Djakarta

Table C1
(Continued)

ECFMG EXAMINATION CENTERS

Japan, Tokyo
Korea, Seoul
Malaysia, Kuala Lumpur
Philippines, Cebu City
Manila
Ryukyu Islands, Okinawa
Taiwan, Taipei
Thailand, Bangkok†
Chieng Mai
Vietnam, Saigon

AFRICA
Congo, Kinshasa (Leopoldville)
Ethiopia, Addis Ababa
Ghana, Accra
Guinea, Conakry
Kenya, Nairobi
Lesotho, Maseru
Liberia, Monrovia
Malawi, Blantyre
Mali, Bamako
Nigeria, Lagos
Senegal, Dakar
Sierra Leone, Freetown
South Africa, Cape Town
Durban
Johannesburg
Tanzania, Dar es Salaam
Uganda, Kampala
Zambia, Lusaka

OCEANIA
Australia, Adelaide
Brisbane
Canberra
Hobart
Melbourne
Perth
Sydney
New Zealand, Auckland
Wellington

† These centers are available only to residents of the country concerned.
Source: *Journal of the American Medical Association, 216* (1971), 1804.

Table C2

EXAMINATIONS GIVEN BY THE EDUCATIONAL COUNCIL FOR FOREIGN MEDICAL GRADUATES 1958 - 1970

Year	First Examination	Repeat Examination	Total	Number Passing
1958	1,094	48	1,142	570
1959	4,477	363	4,840	2,139
1960	11,301	3,467	14,768	5,773
1961	8,204	6,018	14,222	5,381
1962	8,906	5,629	14,535	6,054
1963	11,391	7,739	19,130	6,043
1964	9,378	9,133	18,511	6,820
1965	9,204	9,133	18,337	7,724
1966	10,765	8,223	18,988	7,842
1967	11,777	7,411	19,188	8,820
1968	11,975	7,573	19,548	7,774
1969	12,447	10,151	22,598	8,127
1970	16,631	13,319	29,950	11,916
1971	16,525	14,508	31,033	9,693
Total	144,075	102,715	246,790	94,676

Source: Educational Council for Foreign Medical Graduates, *Annual Report, 1970*, Table 1, 4.
Journal of the American Medical Association 216, (1971), 1614.

Table 6

NUMBER OF FOREIGN MEDICAL GRADUATES TAKING THE ECFMG EXAMINATIONS BY PLACE OF EXAMINATION 1958 - 1970

Year	Total	Domestic	Foreign	Percent Foreign
1958	1,142	1,005	137	12.0
1959	4,840	3,629	1,211	25.0
1960	14,768	12,217	2,551	17.3
1961	14,222	8,530	5,692	40.0
1962	14,535	5,913	8,622	59.3
1963	19,130	6,054	13,259	68.4
1964	18,511	5,712	12,799	69.1
1965	18,337	5,078	13,259	72.3
1966	18,988	3,925	15,063	79.3
1967	19,188	3,698	15,490	80.7
1968	19,548	4,297	15,251	78.0
1969	22,598	5,703	16,895	74.8
1970	29,950	7,339	22,591	75.4

Source: Educational Council for Foreign Medical Graduates.

Table C4

PERFORMANCE OF FMGs ON ECFMG EXAMINATIONS 1958 - 1970

Year	Number of Candidates	Percent Scoring 75 Percent or Higher
1958	1,142	37.8
1959	4,840	44.2
1960	14,768	39.1
1961	14,222	37.8
1962	14,535	41.7
1963	19,130	31.6
1964	18,511	36.8
1965	18,337	42.1
1966	18,988	41.3
1967	19,188	46.0
1968	19,548	39.8
1969	22,598	36.0
1970	29,950	39.8

Source: Educational Council for Foreign Medical Graduates.

Table C5

PERCENTAGE DISTRIBUTION OF SCORES, ECFMG EXAMINATION February 1969

Range of Scores	Actual Distribution, ECFMG Candidates	Expected Distribution, U.S. Medical Students
90 or higher	0.0	4.6
85 - 89	2.1	28.9
80 - 84	10.2	46.1
74 - 79	25.7	19.5
70 - 73	27.2	0.9
65 - 69	24.2	0.0
60 - 64	9.0	0.0
below 60	1.6	0.0

Source: Educational Council for Foreign Medical Graduates, *Annual Report, 1970*, p. 12.

Table C6

ECFMB – STANDARD CERTIFICATES ISSUED
1970

DISTRIBUTION OF RECIPIENTS BY STATE AND COUNTRY

Alabama	11	Kansas	18	Ohio	343
Alaska	0	Kentucky	27	Oklahoma	5
Arizona	25	Louisiana	14	Oregon	12
Arkansas	4	Maine	4	Pennsylvania	255
California	156	Maryland	211	Puerto Rico	23
Canal Zone	0	Massachusetts	243	Rhode Island	43
Colorado	28	Michigan	189	South Carolina	7
Delaware	9	Mississippi	4	South Dakota	1
District of Columbia	50	Missouri	68	Tennessee	28
Florida	128	Montana	1	Texas	37
Georgia	14	Nebraska	4	Utah	4
Guam	0	Nevada	0	Vermont	0
Hawaii	21	New Hampshire	5	Virgin Islands	0
Idaho	1	New Jersey	321	Virginia	47
Illinois	413	New Mexico	2	Washington	24
Indiana	10	New York	1,080	West Virginia	14
Iowa	17	North Carolina	22	Wisconsin	46
		North Dakota	1	Wyoming	0

Total, United States	4,216	(77.6%)
Canada	387	(7.1%)
Other Foreign	833	(15.3%)
Total	5,436	

DISTRIBUTION OF RECIPIENTS BY COUNTRY OF MEDICAL SCHOOL AND CITIZENSHIP[1]

	Country of Medical School		Citizenship	
	Number	Percent	Number	Percent
United States	.	.	250	4.6
Argentina	105	1.9	95	1.7
China – Taiwan	143	2.6	96	1.8
Cuba	123	2.3	154	2.8
Germany – Fed. Rep.	203	3.7	166	3.1
India	791	14.6	758	13.9
Iran	156	2.9	168	3.1
Italy	152	2.8	49	0.9
Japan	173	3.2	164	3.0
Korea	229	4.2	281	4.2
Mexico	134	2.5	108	2.0
Pakistan	147	2.7	144	2.6
Philippines	366	6.7	348	6.4
Spain	116	2.1	54	1.0
Thailand	171	3.1	178	3.2
United Arab Republic	228	4.2	164	3.0
United Kingdom	220	4.0	227	4.2
Other[2]	1,979	36.4	2,195	40.4
Total	5,436		5,436	

[1] Citizenship at time of entering medical school.
[2] Countries with fewer than 100 graduates in either category.
Source: Educational Council for Foreign Medical Graduates, *Annual Report 1970*, p. 15.

Table C7

SOURCE OF CANDIDATES EXAMINED FOR LICENSURE IN THE UNITED STATES 1970

Medical Schools	Number of Schools	Candidates			
		Number Examined	Number Passed	Number Failed	Percent Failed
Approved schools in the United States	86	5,457	4,949	508	9.3
Approved schools in Canada	12	86	74	12	14.0
Foreign medical schools	349	6,236	3,911	2,325	37.3
Unapproved or extinct medical schools	5	18	6	12	66.7
Schools of Osteopathy	5	401	395	6	1.5
Totals	457	12,198	9,335	2,863	23.5

Source: *Journal of the American Medical Association, 216* (1971), 1786.

Table C8

PHYSICIANS EXAMINED FOR U. S. LICENSES ON THE BASIS OF CREDENTIALS OBTAINED IN COUNTRIES OTHER THAN THE UNITED STATES AND CANADA 1935 - 1970

Year	Number Examined	Number Passed	Percentage Failed
1935	437	303	30.7
1936	588	382	35.0
1937	920	637	30.8
1938	1,164	716	38.5
1939	1,691	839	50.4
1940	2,088	948	54.7
1941	1,717	698	59.2
1942	1,630	890	45.4
1943	1,031	519	49.8
1944	691	325	53.0
1945	475	209	56.0
1946	495	221	55.3
1947	601	263	52.9
1948	639	311	51.3
1949	737	319	56.7
1950	799	359	55.0
1951	1,006	524	47.9
1952	1.208	648	46.3
1953	1,463	796	46.3
1954	1,642	943	42.6
1955	1,771	1,042	41,4
1956	1,783	1,012	43,2
1957	2,299	1,345	41.5
1958	2,567	1,518	40.9
1959	2,766	1,870	32,4
1960	2,864	2,013	29.7
1961	2,683	1,890	29.0
1962	2,960	1,980	33.1
1963	2,781	1,861	33.1
1964	3,246	2,215	31.8
1965	3,011	2,043	32.1
1966	3,691	2,281	38.2
1967	4,187	2,590	38.1
1968	4,936	3,100	37.2
1969	4,911	3,164	35.6
1970	6,236	3,911	37.3
Totals	73,714	44,704	39.4

Source: "Medical Licensure Statistics," *Journal of the American Medical Association, 216* (1971), 1797.

Table C9

STATUS OF REQUIREMENTS FOR MEDICAL LICENSURE FOR PHYSICIANS TRAINED IN FOREIGN COUNTRIES OTHER THAN CANADA

U.S. and Territories	Written Examination	Admitted Also on Reciprocal or Endorsement Basis	Citizenship	Offer FLEX Examination	Internship	Certification by Educational Council for Foreign Medical Graduates	Additional Requirements	Examination Fee (in Dollars)
Alabama	x	-	x	x	x	x	-	100
Alaska	x	x	-	x	x	x	-	150
Arizona	x	-	D	x	x	x	x	75
Arkansas	x	-	x	-	x	-	-	50
California	x	-	-	x	x	-	x	50
Canal Zone	x	x	-	-	x	x	x	50
Colorado	x	-	x	-	x	x	x	75
Connecticut	x	x	D	x	-	-	x	75
Delaware	x	x	D	-	x	x	x	50
District of Columbia	x	-	-	-	x	x	x	50
Florida	x	-	D	-	x	x	x	50
Georgia	x	x	x	x	x	x	x	50
Guam	-	x	-	-	x	x	x	50
Hawaii	x	-	D	x	x	x	x	75
Idaho	x	-	D	x	x	x	x	100
Illinois	x	x	D	x	x	-	x	75
Indiana	x	x	D	x	-	-	x	85
Iowa	x	x	D	-	x	x	x	50
Kansas	x	-	D	-	x	x	x	50
Kentucky	x	x	x	-	x	x	x	50
Louisiana	x	-	D	-	x	x	x	100
Maine	x	x	I	x	x	x	x	100
Maryland	x	x	D	-	x	x	x	100
Massachusetts	x	x	D	x	-	x	x	125
Michigan	x	x	D	x	x	x	x	75
Minnesota	x	x	D	-	x	x	-	75
Mississippi	x	-	x	-	-	x	x	35
Missouri	x	x	-	-	x	-	x	50
Montana	x	x	x	x	x	x	-	100
Nebraska	x	x	x	x	-	x	-	50
Nevada	x	x	D	x	x	x	-	100
New Hampshire	x	x	D	-	x	x	-	100

Table C9
(Continued)

STATUS OF REQUIREMENTS FOR MEDICAL LICENSURE FOR PHYSICIANS TRAINED IN FOREIGN COUNTRIES OTHER THAN CANADA

U.S. and Territories	Written Examination	Admitted Also on Reciprocal or Endorsement Basis	Citizenship	Offer FLEX Examination	Internship	Certification by Educational Council for Foreign Medical Graduates	Additional Requirements	Examination Fee (in Dollars)
New Jersey	x	x	D	x	x	-	x	50
New Mexico	x	x	D	x	-	x	-	100
New York	x	x	D	x	x	x	x	40
North Carolina	x	-	I	x	-	x	x	100
North Dakota	x	-	-	x	x	x	x	100
Ohio	x	x	D	x	x	x	x	100
Oklahoma	x	-	D	-	x	x	0	25
Oregon	x	x	I	x	x	x	x	150
Pennsylvania	x	-	D	-	x	x	x	50
Puerto Rico	x	-	D	-	x	-	-	30
Rhode Island	x	x	D	-	x	x	x	50
South Carolina	x	-	I	x	x	x	x	100
South Dakota	x	x	D	-	x	x	x	40
Tennessee	x	-	-	-	x	x	x	50
Texas	x	x	D	-	-	x	x	50
Utah	x	-	D	x	x	x	-	75
Vermont	x	x	D	-	x	x	-	100
Virgin Islands	x	-	-	-	x	x	x	100
Virginia	x	x	D	x	x	x	x	100
Washington	x	x	-	-	x	x	-	25
West Virginia	x	x	D	x	x	x	x	100
Wisconsin	x	x	I	-	x	x	x	100
Wyoming	x	x	D	x	x	x	-	75

x = Implies yes.
D = Declaration of intention to become citizen of United States.
I = Immigrant visa (blue card).

Source: "Medical Licensure Statistics", *Journal of the American Medical Association, 216*, (1971), 1831.

Table C10

LICENSING OF FOREIGN MEDICAL GRADUATES BY STATE 1970

State of License	Total Physicians Examined for License	Percent Failed	FMG's Examined for License	Percent Failed	Additions to the Profession Who Were FMG's	FMG's as Percent of all Additions to Med Prof
Alabama	28	4.6	0	0.0	1	1.2
Alaska	6	0.0	0	0.0	2	16.6
Arizona	67	35.8	52	34.8	26	47.2
Arkansas	92	4.3	0	0.0	0	0.0
California	441	29.5	205	58.1	94	8.2
Colorado	24	4.2	9	11.1	2	2.0
Connecticut	40	40.0	34	41.2	14	10.2
Delaware	32	37.5	29	41.4	16	89.0
District of Columbia	0	0.0	0	0.0	150	76.5
Florida	2,345	24.9	681	39.5	138	40.2
Georgia	314	0.1	32	6.3	16	8.6
Hawaii	55	0.0	12	0.0	4	14.8
Idaho	3	0.0	0	0.0	0	0
Illinois	483	46.1	357	60.8	107	30.8
Indiana	411	33.6	206	65.0	100	32.7
Iowa	306	0.0	47	0.0	13	10.0
Kansas	139	5.0	44	11.4	18	15.2
Kentucky	319	6.6	67	29.9	34	15.9
Louisiana	264	7.9	45	13.3	7	3.3
Maine	220	40.0	218	39.9	110	88.7
Maryland	357	34.2	227	37.0	140	37.7
Massachusetts	205	43.4	193	40.4	47	14.5
Michigan	100	13.0	85	15.3	72	16.8
Minnesota	97	21.6	48	43.8	21	7.2
Mississippi	101	1.9	11	9.1	5	5.1
Missouri	675	4.7	224	12.1	176	43.7
Montana	58	0.0	19	0.0	17	70.8
Nebraska	105	0.0	0	0.0	4	3.7
Nevada	3	33.3	0	0.0	0	0.0
New Hampshire	37	29.8	36	30.6	26	59.0
New Jersey	702	40.2	693	40.7	368	77.6
New Mexico	44	34.1	39	38.5	16	48.4
New York	771	59.7	712	60.5	204	16.6
North Carolina	216	18.1	55	55.7	10	6.8
North Dakota	22	13.6	18	16.7	15	75.0
Ohio	269	23.8	51	92.2	11	3.5
Oklahoma	110	17.3	0	0.0	4	4.5
Oregon	5	0.0	0	0.0	3	7.7
Pennsylvania	847	4.7	809	4.8	550	54.9
Rhode Island	21	23.8	21	23.8	18	50.0
South Carolina	5	0.0	0	0.0	1	5.5
South Dakota	24	4.2	11	9.1	5	27.7
Tennessee	179	0.0	0	0.0	3	1.6
Texas	572	8.7	169	18.3	80	17.5
Utah	22	4.5	0	0.0	5	10.4

Table C10
(Continued)

LICENSING OF FOREIGN MEDICAL GRADUATES BY STATE
1970

State of License	Total Physicians Examined for License	Percent Failed	FMG's Examined for License	Percent Failed	Additions to the Profession Who Were FMG's	FMG's as Percent of all Additions to Med Prof
Vermont	194	41.8	166	47.6	96	53.0
Virginia	409	30.5	214	54.7	64	20.1
Washington	145	27.6	139	28.1	97	41.6
West Virginia	131	50.4	114	57.9	38	56.7
Wisconsin	65	7.9	32	12.5	23	22.8
Wyoming	4	0.0	0	0.0	0	0.0
Totals	12,087	23.5	6,124	37.9	2,971	27.1

Note: This table excludes Guam, Puerto Rico, and Virgin Islands. The totals are thus not exactly comparable to Tables C7 and C11.

Source: "Medical Licensure Statistics, 1970," *Journal of the American Medical Association, 216*. (1971), 1788, 1797, 1808 - 15, 1842 - 43.

Table C11

NUMBER AND PERCENTAGE OF NEW ADDITIONS TO THE UNITED STATES MEDICAL PROFESSION REPRESENTED BY FOREIGN MEDICAL GRADUATES 1950 - 70

Year	New U.S. and Canadian - trained Licentiates	New Foreign - trained Medical Licentiates	Total New Medical Licentiates	Percent of New Medical Licentiates Attributable to Foreign-trained M.D.s
1950	5,694	308	6,002	5.1
1951	5,823	450	6,273	7.2
1952	6,316	569	6,885	8.3
1953	6,591	685	7,276	9.4
1954	7,145	772	7,917	9.8
1955	6,830	907	7,737	11.7
1956	6,611	852	7,463	11.4
1957	6,441	1,014	7,455	13.6
1958	6,643	1,166	7,809	14.9
1959	6,643	1,626	8,269	19.7
1960	6,611	1,419	8,030	17.7
1961	6,443	1,580	8,023	19.7
1962	6,648	1,357	8,005	17.0
1963	6,832	1,451	8,283	17.5
1964	6,605	1,306	7,911	16.5
1965	7,619	1,528	9,147	16.7
1966	7,217	1,634	8,851	18.5
1967	7,267	2,157	9,424	22.9
1968	7,581	2,185	9,766	22.4
1969	7,671	2,307	9,978	23.1
1970	8,016	3,016	11,032	27.3

Source: "Medical Licensure Statistics", *Journal of the American Medical Association, 216* (1971), 1789, Table 8; 1797, Table 16.

Table C12

INITIAL UNITED STATES LICENSES ISSUED TO GRADUATES OF FOREIGN MEDICAL SCHOOLS 1950 - 1970 †

Year	Total	American Graduates of Foreign Schools
1950	308	n/a
1951	450	n/a
1952	569	n/a
1953	685	n/a
1954	772	n/a
1955	907	n/a
1956	852	n/a
1957	1,014	212
1958	1,166	284
1959	1,626	366
1960	1,419	386
1961	1,580	468
1962	1,357	201
1963	1,451	395
1964	1,306	200
1965	1,528	411
1966	1,634	252
1967	2,081	279
1968	2,185	235
1969	2,307	179
1970	3,016	198
Total	28,163	4,066

† Excludes graduates of Canadian medical schools. Figures refer to licenses of physicians who were not previously licensed in the United States.

Source: "Medical Licensure Statistics for 1970," *Journal of the American Medical Association 216* (1971), 1797; "Medical Education in the United States," *Ibid.,218* (1971), 1219.

D. Distribution of foreign medical graduates in the United States by major professional activity and location.

Table D1 (i)

NUMBER OF PHYSICIANS LOCATED IN THE UNITED STATES, ITS TERRITORIES, OR O'' TEMPORARY FOREIGN ASSIGNMENT, CLASSIFIED ACCORDING TO WHETHER THEY ARE GRADUATES OF U.S. MEDICAL SCHOOLS

Mid – 1959

Location of Physicians	Total Number of Physicians	Graduates of U.S. Schools	Graduates of other than U.S. Schools				Percent of Total Graduated from Foreign Schools
			Total	Canadian Schools	Foreign Schools	School Unknown	
Non-Federal physicians:							
Alabama	2,441	2,409	32	14	16	2	0.7
Arizona	1,182	1,112	70	32	36	2	3.0
Arkansas	1,623	1,568	55	7	4	44	0.2
California	23,605	21,727	1,878	662	1,214	2	5.1
Colorado	2,569	2,479	90	21	63	6	2.5
Connecticut	4,075	3,582	493	171	321	1	7.9
Delaware	521	476	45	16	29	0	5.6
D. C.	2,527	2,374	153	33	120	0	4.7
Florida	5,595	5,330	265	84	176	5	3.1
Georgia	3,500	3,442	58	15	43	0	1.2
Idaho	572	563	9	7	2	0	0.3
Illinois	12,477	10,980	1,497	166	1,330	1	10.7
Indiana	4,486	4,368	118	35	83	0	1.9
Iowa	2,728	2,625	103	28	74	1	2.7
Kansas	2,224	2,160	64	24	40	0	1.8
Kentucky	2,638	2,580	58	13	42	3	1.6
Louisiana	3,493	3,459	34	27	7	0	0.2
Maine	976	802	174	100	74	0	7.6
Maryland	4,018	3,618	400	86	314	0	7.8
Massachusetts	8,910	8,206	704	322	369	24	4.1
Michigan	8,482	7,722	760	530	230	0	2.7
Minnesota	4,463	4,192	271	144	125	2	2.8
Mississippi	1,649	1,607	42	11	12	19	0.7
Missouri	4,835	4,669	166	41	123	2	2.5
Montana	629	615	14	10	4	0	0.6
Nebraska	1,520	1,503	17	5	12	0	0.8
Nevada	282	259	23	16	6	1	2.1
New Hampshire	783	658	125	91	34	0	4.3
New Jersey	7,133	6,169	964	155	807	2	11.3
New Mexico	693	656	37	11	24	2	3.5
New York	31,652	24,665	6,987	1,062	5,925	0	18.7
North Carolina	4,142	4,045	97	45	49	3	1.2
North Dakota	499	410	89	61	28	0	5.6
Ohio	11,242	10,187	1,055	252	803	0	7.1
Oklahoma	2,191	2,153	38	13	13	12	0.6
Oregon	2,236	2,189	47	33	12	2	0.5
Pennsylvania	14,818	14,254	564	241	322	1	2.2
Rhode Island	1,044	858	186	53	133	0	12.7
South Carolina	1,810	1,801	9	2	7	0	0.4
South Dakota	481	432	49	7	42	0	8.7

Table D1 (i)
(Continued)

NUMBER OF PHYSICIANS LOCATED IN THE UNITED STATES, ITS TERRITORIES, OR ON TEMPORARY FOREIGN ASSIGNMENT, CLASSIFIED ACCORDING TO WHETHER THEY ARE GRADUATES OF U.S. MEDICAL SCHOOLS
Mid – 1959

Location of Physicians	Total Number of Physicians	Graduates of U.S. Schools	Graduates of other than U.S. Schools				Percent of Total Graduated from Foreign Schools
			Total	Canadian Schools	Foreign Schools	School Unknown	
Tennessee	3,581	3,504	77	20	35	22	1.0
Texas	9,282	8,938	344	61	233	50	2.5
Utah	1,081	1,062	19	13	6	0	0.6
Vermont	575	530	45	34	10	1	1.7
Virginia	3,910	3,675	235	44	191	0	4.9
Washington	3,430	3,195	235	140	94	1	2.7
West Virginia	1,638	1,577	61	21	38	2	2.3
Wisconsin	4,059	3,941	118	36	80	2	2.0
Wyoming	270	266	4	2	2	0	0.7
Alaska	109	7	1	5	1	4.6	
Hawaii	620	558	62	19	42	1	6.8
Puerto Rico	1,059	801	258	10	247	1	23.3
U.S. Territories	134	110	24	2	22	0	16.4
Foreign countries	1,719	1,415	304	137	165	2	9.6
Unknown location	1,306	1,104	202	37	135	30	10.3
Federal physicians	17,519	16,540	979	198	781	0	4.5
All physicians	241,036	220,222	20,814	5,421	15,154	239	6.3

Source: William H. Stewart and Maryland Pennel, *Health Manpower Source Book, Medical School Alumni*, Public Health Service Publication No. 263, Section 11, Washington, D.C., 1961, Table 1.

Table D1 (ii)

NUMBER OF PHYSICIANS LOCATED IN THE UNITED STATES, ITS TERRITORIES, OR ON TEMPORARY FOREIGN ASSIGNMENT, CLASSIFIED ACCORDING TO WHETHER THEY ARE GRADUATES OF U.S. MEDICAL SCHOOLS

December 1967

Location of Physicians	Total Number of Physicians	Graduates of U.S. Schools	Graduates of other than U.S. Schools				Percent of Total Graduated from Foreign Schools
			Total	Canadian Schools	Foreign Schools	School Unknown	
Alabama	3,175	3,062	113	12	100	1	3.1
Alaska	260	242	18	6	12	0	4.6
Arizona	2,377	2,115	262	39	223	0	9.4
Arkansas	1,871	1,836	35	8	19	8	1.0
California	37,220	33,736	3,484	1,095	2,389	0	6.4
Canal Zone	174	142	32	0	32	0	18.4
Colorado	3,850	3,569	281	38	240	3	6.2
Connecticut	5,641	4,315	1,326	240	1,126	0	20.0
Delaware	736	543	193	23	170	0	23.1
District of Columbia	3,999	3,230	769	43	726	0	18.2
Florida	9,716	8,285	1,431	143	1,284	4	13.2
Georgia	5,101	4,749	352	21	331	0	6.5
Hawaii	1,038	846	192	41	150	1	14.5
Idaho	683	663	20	9	11	0	1.6
Illinois	15,606	11,619	3,987	189	3,798	0	24.3
Indiana	5,135	4,809	325	42	284	0	5.5
Iowa	3,029	2,756	273	25	248	0	8.2
Kansas	2,779	2,469	310	33	277	0	10.0
Kentucky	3,422	3,105	317	21	294	2	8.6
Louisiana	4,507	4,324	183	27	156	0	3.5
Maine	1,127	856	271	107	164	0	14.6
Maryland	8,503	6,639	1,864	116	1,748	0	20.6
Massachusetts	11,640	9,555	2,085	365	1,712	8	14.7
Michigan	10,931	8,563	2,368	479	1,889	0	17.3
Minnesota	5,674	4,905	769	214	555	0	9.8
Mississippi	1,997	1,920	77	10	61	6	0.3
Missouri	5,972	5,129	843	46	796	1	13.3
Montana	768	728	40	15	25	0	3.3
Nebraska	1,810	1,751	59	5	54	0	3.0
Nevada	492	463	29	19	9	1	1.8
New Hampshire	998	782	216	98	118	0	11.8
New Jersey	9,897	7,187	2,710	135	2,575	0	26.0
New Mexico	1,160	1,051	109	19	90	0	7.8
New York	41,860	27,592	14,288	1,099	13,189s	0	31.5
North Carolina	5,565	5,261	304	62	242	0	4.3
North Dakota	665	546	119	44	75	0	11.3
Ohio	14,244	11,087	3,157	233	2,924	0	20.5
Oklahoma	2,769	2,673	96	16	77	3	2.8
Oregon	2,908	2,738	170	58	112	0	3.9
Pennsylvania	18,014	15,571	2,437	247	2,189	1	12.2

Table D1 (ii)
(Continued)

NUMBER OF PHYSICIANS LOCATED IN THE UNITED STATES, ITS TERRITORIES, OR ON TEMPORARY FOREIGN ASSIGNMENT, CLASSIFIED ACCORDING TO WHETHER THEY ARE GRADUATES OF U.S. MEDICAL SCHOOLS DECEMBER 1967

Location of Physicians	Total Number of Physicians	Graduates of U.S. Schools	Graduates of other than U.S. Schools				Percent of Total Graduated from Foreign Schools
			Total	Canadian Schools	Foreign Schools	School Unknown	
Puerto Rico	2,162	1,122	1,040	3	1,030	1	47.6
Rhode Island	1,499	1,030	469	63	406	0	27.1
South Carolina	2,473	2,405	68	14	54	0	2.2
South Dakota	631	561	70	3	67	0	10.6
Tennessee	4,787	4,500	287	15	267	5	5.6
Texas	13,763	12,452	1,311	103	1,200	8	8.7
Utah	1,436	1,379	57	16	41	0	2.9
Vermont	766	662	104	42	62	0	8.1
Virginia	6,144	5,294	850	68	782	0	12.7
Virgin Islands	72	36	36	3	33	0	45.8
Washington	5,041	4,481	560	192	368	0	7.3
West Virginia	1,880	1,544	336	19	317	0	16.9
Wisconsin	5,286	4,707	579	55	523	1	9.9
Wyoming	347	335	12	3	9	0	2.6
Pacific Islands	44	19	25	2	23	0	52.3
Foreign countries	2,627	1,484	1,143	556	587	0	22.3
Military overseas	3,212	3,073	139	35	104	0	3.2
Total	309,483	256,482	53,001	6,600	46,347	54	15.0
U.S. and Territories	303,644	251,925	51,719	6,009	45,656	54	15.0
Overseas	5,839	4,557	1,282	591	691	0	11.8

Note: Figures include non-federal and federal physicians.
Source: C. N. Theodore, G. E. Sutter, J. N. Haug, *Medical School Alumni 1967*, American Medical Association, Chicago, 1968, Tables, 8, 9.

Table D1 (iii)

PHYSICIANS IN THE UNITED STATES
BY STATE OF PRACTICE AND COUNTRY OF GRADUATION
December 31, 1970

State	Total (100.0%)	Country of Graduation					
		United States		Foreign		Canada	
		Number	Percent	Number	Percent	Number	Percent
Total	334,028	270,637	81.0	57,217	17.1	6,174	1.8
Alabama	3,377	3,219	95.3	147	4.4	11	0.3
Alaska	324	303	93.5	17	5.2	4	1.2
Arizona	2,938	2,608	88.8	282	9.6	48	1.6
Arkansas	1,955	1,924	98.4	25	1.3	6	0.3
California	41,640	37,476	90.0	1,980	7.2	1,184	2.8
Colorado	4,386	4,076	92.9	259	5.9	51	1.2
Connecticut	6,072	4,617	76.0	1,267	20.9	188	3.1
Delaware	783	543	69.3	217	27.7	23	2.9
District of Columbia	4,073	3,253	79.9	778	19.9	42	1.0
Florida	11,451	9,513	83.1	1,769	15.4	169	1.5
Georgia	5,546	5,088	91.7	434	7.8	24	0.4
Hawaii	1,235	999	80.9	203	16.4	33	2.7
Idaho	718	697	97.1	11	1.5	10	1.4
Illinois	16,323	11,608	71.1	4,542	27.8	173	1.1
Indiana	5,470	4,954	90.6	473	8.6	43	0.8
Iowa	3,061	2,708	88.5	323	10.6	30	1.0
Kansas	2,910	2,582	88.7	299	10.3	29	1.0
Kentucky	3,560	3,192	89.7	346	9.7	22	0.6
Louisiana	4,768	4,476	93.9	261	5.5	31	0.7
Maine	1,186	903	76.1	174	14.7	109	9.2
Maryland	9,518	7,140	75.0	2,249	23.6	129	1.4
Massachusetts	12,576	10,227	81.3	1,998	15.9	351	2.8
Michigan	11,364	8,559	75.3	2,376	20.9	429	3.8
Minnesota	6,145	5,303	86.3	645	10.5	197	3.2
Mississippi	2,077	2,001	96.3	67	3.2	9	0.4
Missouri	6,314	5,283	83.7	982	15.6	49	0.8
Montana	787	743	94.4	30	3.8	14	1.8
Nebraska	1,855	1,777	95.8	70	3.8	8	0.4
Nevada	595	557	93.6	14	2.4	24	4.0
New Hampshire	1,098	857	78.1	145	13.2	96	8.7
New Jersey	10,923	7,565	69.3	3,224	29.5	134	1.2
New Mexico	1,390	1,242	89.4	127	9.1	21	1.5
New York	44,800	27,795	62.0	15,946	35.6	1,059	2.4
North Carolina	6,069	5,696	93.9	311	5.1	62	1.0
North Dakota	660	528	80.0	91	13.8	41	6.2
Ohio	14,740	10,996	74.6	3,516	23.9	228	1.5
Oklahoma	2,399	2,775	95.7	105	3.6	19	0.7
Oregon	3,181	2,981	93.7	141	4.4	59	1.9
Pennsylvania	18,712	15,779	84.3	2,710	14.5	223	1.2
Rhode Island	1,638	1,084	66.2	495	30.2	59	3.6

Table D1 (iii)
(Continued)

PHYSICIANS IN THE U.S. BY STATE OF PRACTICE AND COUNTRY OF GRADUATION
December 31, 1970

State	Total (100.0%)	Country of Graduation					
		United States		Foreign		Canada	
		Number	Percent	Number	Percent	Number	Percent
South Carolina	2,670	2,560	95.9	99	3.7	11	0.4
South Dakota	629	556	88.4	70	11.1	3	0.5
Tennessee	5,022	4,698	93.5	306	6.1	18	0.4
Texas	14,952	13,307	89.0	1,540	10.3	105	0.7
Utah	1,569	1,508	96.1	43	2.7	18	1.1
Vermont	868	756	87.1	71	8.2	41	4.7
Virginia	6,552	5,588	85.4	896	13.7	68	1.0
Washington	5,562	4,939	88.6	429	7.7	194	3.5
West Virginia	1,946	1,465	75.3	463	23.8	18	0.9
Wisconsin	5,588	4,893	87.6	642	11.5	53	0.9
Wyoming	364	346	95.1	13	3.6	5	1.4
Possessions	2,836	1,412	49.8	1,414	49.9	10	0.4
APO-FPO	3,149	2,912	92.5	204	6.5	33	1.0
Address Unknown	3,204	2,070	64.6	978	30.5	156	4.9

Note: Percentages may not add due to rounding.
Source: J. N. Haug, B. C. Martin, *Foreign Medical Graduates in the United States, 1970*, p. 23.

Table D2

PHYSICIANS IN THE UNITED STATES BY AGE AND COUNTRY OF GRADUATION December 31, 1970

Age	Total	Country of Graduation		
		United States	Foreign	Canada
		NUMBER		
Under 30	38,569	32,831	5,368	370
30 - 34	45,958	32,384	11,902	672
35 - 39	43,955	33,321	9,763	871
40 - 44	41,087	31,024	9,222	841
45 - 49	41,021	33,534	6,834	653
50 - 54	30,749	26,442	3,722	585
55 - 59	27,736	24,047	3,109	580
60 - 64	23,722	20,042	3,210	470
65 - 69	16,334	14,405	1,501	428
70 - 74	8,510	6,794	1,290	426
75 & Over	16,387	14,813	1,296	278
Total	334,028	270,637	57,217	6,174
		PERCENT		
Under 30	11.5	12.1	9.4	6.0
30 - 34	13.8	12.3	20.8	10.9
35 - 39	13.2	12.3	17.1	14.1
40 - 44	12.3	11.5	16.1	13.6
45 - 49	12.3	12.4	11.9	10.6
50 - 54	9.2	9.8	6.5	9.5
55 - 59	8.3	8.9	5.4	9.4
60 - 64	7.1	7.5	5.6	7.6
65 - 69	4.9	5.3	2.6	6.9
70 - 74	2.5	2.5	2.3	6.9
75 & Over	4.9	5.5	2.3	4.5
Total	100.0	100.0	100.0	100.0

Note: Percentages may not add due to rounding.
Source: J.N. Haug, B.C. Martin, *Foreign Medical Graduates in the United States*, 1970, p. 21.

Table D3

FOREIGN MEDICAL GRADUATES AND U.S. AND CANADIAN MEDICAL GRADUATES IN THE UNITED STATES BY MAJOR PROFESSIONAL ACTIVITY December 31, 1970

Professional Activity	Country of Graduation					
	United States		Canada		Other Countries	
	Number	Percent	Number	Percent	Number	Percent
Total	270,637	100.0	6,174	100.0	57,217	100.0
Patient Care	225,622	83.4	4,722	76.5	48,191	84.2
Office-based	167,949	62.1	3,510	56.9	20,980	36.7
Hospital-based	57,673	21.4	1,212	19.6	27,211	47.6
Interns and Residents	33,969	12.6	611	9.9	16,648	29.1
Full-time Staff	23,704	8.8	601	9.7	10,563	18.5
Medical Teaching	4,446	1.6	136	2.2	1,006	1.8
Administration	10,667	3.9	297	4.8	1,194	2.1
Research	8,321	3.1	323	5.2	3,285	5.7
Other	2,108	0.8	61	1.0	466	0.8
Not Classified	73	†	9	0.1	276	0.5
Inactive	17,330	6.4	470	7.6	1,821	3.2
Address Unknown	2,070	0.8	156	2.5	978	1.7

† Less than 0.05%.

Source: J. N. Haug, B. C. Martin, *Foreign Medical Graduates in the United States, 1970*, p. 18.

Table D4

FOREIGN MEDICAL GRADUATES IN COMPARISON WITH ALL PHYSICIANS IN THE UNITED STATES BY MAJOR PROFESSIONAL ACTIVITY December 31, 1970

Major Professional Activities	Foreign Medical Graduates†	All Physicians	Foreign Medical Graduates as Percent of All Physicians
Patient Care	48,191	278,535	17.3
Office-based practice	20,980	192,439	10.9
Hospital-based Practice	27,211	86,096	31.6
Interns	3,050	11,449	26.6
Residents	13,598	39,779	34.2
Full-time Staff	10,563	34,868	30.3
Medical Teaching	1,006	5,588	18.0
Administration	1,194	12,158	9.8
Research	3,285	11,929	27.5
Other	466	2,635	17.7
Inactive, unknown	3,075	23,183	13.3
Total Physicians	57,217	334,028	17.1

† Excludes graduates of Canadian schools; includes American graduates of foreign schools.

Source: J. N. Haug, B. C. Martin, *Foreign Medical Graduates in the United States, 1970*, p. 18.

Table D5

FOREIGN MEDICAL GRADUATES † IN COMPARISON WITH ALL PHYSICIANS IN THE UNITED STATES BY SPECIALTY December 31, 1970

Specialty	Number of Foreign Medical Graduates	All Physicians	Foreign Medical Graduates Percent of All Physicians
Allergy	191	1,719	11.1
Anesthesiology	3,304	10,860	30.4
Cardiovascular Disease	1,249	6,476	19.3
Child Psychiatry	425	2,090	20.3
Colon and Rectal Surgery	62	667	9.3
Dermatology	388	4,003	9.7
Diagnostic Radiology	336	1,968	17.1
Gastroenterology	390	2,010	19.4
General Practice	6,742	57,948	11.6
General Surgery	5,286	29,761	17.8
Inactive, Unknown	3,075	23,183	13.3
Internal Medicine	6,372	41,872	15.2
Neurological Surgery	409	2,578	15.9
Neurology	624	3,074	20.3
Obstetrics and Gynecology	3,064	18,876	16.2
Ophthalmology	810	9,927	8.2
Orthopedic Surgery	882	9,620	9.2
Other and Unspecified	6,967	28,024	24.9
Otolaryngology	641	5,409	11.9
Pathology	3,132	10,283	30.5
Pediatric Allergy	80	391	20.5
Pediatric Cardiology	169	487	34.7
Pediatrics	3,542	17,941	19.8
Physical Medicine	501	1,479	33.9
Plastic Surgery	213	1,600	13.3
Psychiatry	5,025	21,146	23.8
Pulmonary Diseases	618	2,315	26.7
Radiology	1,407	10,524	13.4
Therapeutic Radiology	209	868	24.1
Thoracic Surgery	365	1,809	20.2
Urology	739	5,795	12.8
Total	57,217	334,028	17.7

† Excludes Canadian medical graduates.

Source: J.N. Haug, B.D. Martin, *Foreign Medical Graduates in the United States, 1970*, p. 20.

Table D6

FOREIGN MEDICAL GRADUATES IN ANESTHESIOLOGY, RADIOLOGY, PATHOLOGY, PHYSICAL MEDICINE, AND PSYCHIATRY IN COMPARISON WITH ALL PHYSICIANS IN THESE SPECIALITIES
December 31, 1970

Specialty	Total	Office-based Practice	Hospital-based practice		Teaching and Research	Other
			Interns and Residents	Fulltime Staff		
A. NUMBER OF FOREIGN MEDICAL GRADUATES[1]						
Anesthesiology	3,304	1,697	744	609	221	33
Radiology[2]	1,952	664	597	520	122	49
Pathology	3,132	504	1,106	878	422	222
Physical Medicine	501	107	153	212	13	16
Psychiatry	5,025	1,608	939	1,891	216	371
B. TOTAL U.S., CANADIAN, AND FOREIGN GRADUATES						
Anesthesiology	10,860	7,379	1,408	1,326	588	159
Radiology[2]	13,360	7,131	2,776	2,496	500	457
Pathology	10,283	3,048	2,268	2,560	1,263	1,144
Physical Medicine	1,479	549	236	519	62	113
Psychiatry	21,146	10,312	3,278	4,668	1,082	1,806
C. FOREIGN MEDICAL GRADUATES AS A PERCENT OF TOTAL PHYSICIANS IN EACH CATEGORY						
Anesthesiology	30.4	23.0	52.8	45.9	37.6	20.8
Radiology[2]	14.6	9.3	21.5	20.8	24.4	10.7
Pathology	30.5	16.5	48.8	34.3	33.4	19.4
Physical Medicine	33.9	19.5	64.8	40.9	21.0	14.2
Psychiatry	23.8	15.6	28.7	40.5	20.0	20.6

[1] Excludes Canadian medical graduates.

[2] Includes radiology, diagnostic radiology, therapeutic radiology.

Source: From J. N. Haug, B.C. Martin, *Foreign Medical Graduates in the United States, 1970*, p. 27; J. N. Haug, G.A. Roback, B.C. Martin, *Distribution of Physicians in the United States, 1970*, p. 25.

Table D7

FOREIGN MEDICAL GRADUATES † IN THE UNITED STATES BY COUNTRY OF GRADUATION AND FEDERAL AND NON-FEDERAL EMPLOYMENT December 31, 1970

Country	Total	Employment		Address Unknown
		Federal	Non-Federal	
Afghanistan	19	1	18	0
Algeria	1	0	1	0
Argentina	1,313	87	1,144	82
Australia	325	15	303	7
Austria	1,698	108	1,580	10
Belgium	511	44	459	8
Bolivia	146	19	122	5
Brazil	377	17	316	44
Bulgaria	49	7	41	1
Burma	98	6	91	1
Ceylon	93	4	88	1
Chile	176	11	155	10
China	589	51	538	0
Colombia	952	103	782	67
Congo (Kinshasa)	1	0	1	0
Costa Rica	11	1	10	0
Cuba	1,757	205	2,519	33
Czechoslovakia	654	42	607	5
Denmark	82	6	76	0
Dominican Republic	629	38	559	32
East Germany	745	45	688	12
Ecuador	147	19	125	3
El Salvador	91	8	76	7
Ethiopia	1	0	1	0
Finland	31	3	28	0
France	685	42	630	13
Greece	813	39	764	10
Guatemala	109	7	98	4
Haiti	329	31	289	9
Honduras	49	2	47	0
Hong Kong	105	4	101	0
Hungary	862	62	791	9
Iceland	42	0	39	3
India	3,957	238	3,684	35
Indonesia	89	6	83	0
Iran	1,631	90	1,522	19
Iraq	188	13	173	2
Ireland	924	59	850	15
Israel	214	7	200	7
Italy	3,208	183	2,990	35
Jamaica	46	4	39	3
Japan	882	48	819	15
Lebanon	615	31	577	7
Malaysia	1	0	1	0
Malta	6	0	6	0
Mexico	1,821	117	1,629	75
Netherlands	726	46	676	4
New Zealand	79	5	72	2
Nicaragua	78	3	72	3
Nigeria	24	0	23	1
North Korea	5	0	5	0
North Vietnam	3	0	3	0
Norway	44	4	40	0
Pakistan	784	74	704	6
Panama	23	2	18	3
Paraguay	76	4	71	1
Peru	618	47	549	22
Philippines	7,352	432	6,829	91
Poland	602	40	553	9
Portugal	107	6	96	5
Rhodesia	1	0	1	0
Romania	317	13	303	1
Senegal	1	0	1	0
Singapore	23	1	22	0
South Africa	356	17	330	9
South Korea	2,095	106	1,971	18
South Vietnam	12	2	8	2
Spain	1,801	156	1,597	48
Sudan	2	1	1	0
Surinam	2	0	2	0

Table D7
(Continued)

FOREIGN MEDICAL GRADUATES IN THE UNITED STATES BY COUNTRY OF GRADUATION AND FEDERAL AND NON-FEDERAL EMPLOYMENT
December 31, 1970

Country	Total	Employment		Address Unknown
		Federal	Non-Federal	
Sweden	54	7	47	0
Switzerland	2,510	161	2,334	15
Syria	176	7	164	2
Taiwan (Formosa)	976	74	895	7
Thailand	1,098	75	1,008	15
Turkey	866	40	817	9
Uganda	7	0	7	0
Union of Sov. Soc. Republics	871	48	814	9
United Arab Republic (Egypt)	732	37	690	5
United Kingdom	2,641	131	2,474	36
Uruguay	46	3	41	2
Venezuela	133	9	106	18
West Germany	3,502	234	3,227	41
Yugoslavia	405	29	371	5
Total	57,217	3,637	52,602	978

† Excludes Canadian medical graduates in the United States.
Source: J. N. Haug, B. C. Martin, *Foreign Medical Graduates in the United States, 1970*, pp. 302 - 03.

Table D8

GRADUATES OF FOREIGN MEDICAL SCHOOLS AS PERCENTAGE OF ALL PHYSICIANS IN SELECTED SMSA's† December 31, 1967

Location	Total Physicians	Graduates of Foreign Medical Schools	Percentage of Total Who Are Graduates of FMS
Total U. S.	306,970	45,816	14.9
Non-metropolitan	47,859	4,100	8.6
Metropolitan	259,111	41,716	16.1
Akron, Ohio	849	191	22.5
Albany, N.Y.	1,425	365	25.6
Atlantic City, N.J.	265	75	28.3
Baltimore, Md.	4,817	1,317	27.3
Binghamton, N.Y.	406	116	28.6
Bridgeport, Conn.	1,370	347	25.3
Buffalo, N.Y.	2,397	548	22.9
Canton, Ohio	386	83	21.5
Chicago, Ill.	11,987	3,266	27.2
Cleveland, Ohio	4,121	1,185	28.8
Danville, Ill.	103	23	22.3
Detroit	5,850	1,366	23.4
Flint, Michigan	487	108	22.2
Galesburg, Ill.	76	16	21.1
Jersey City, N.J.	842	324	38.5
Kankakee, Ill.	113	51	45.1
Laredo, Texas	49	20	40.8
Lewiston, Maine	113	24	21.2
Long Branch, N.J.	556	118	21.2
Lorain, Ohio	245	94	38.4
Miami, Fla.	2,834	715	25.2
Middletown, Conn.	165	52	31.5
Newark, N.J.	3,470	857	27.7
Newburgh, N.Y.	325	97	29.8
New Brunswick, N.J.	773	271	35.1
New York City	31,458	10,999	35.0
Paterson, N.J.	1,875	464	24.7
Pittsfield, Mass.	239	51	21.3
Providence, R.I.	1,408	389	27.6
Steubenville, Ohio	120	26	21.7
Toledo, Ohio	912	234	25.7
Trenton, N.J.	618	154	24.9
Utica, N.Y.	438	105	24.0
Wilmington, Del.	694	157	22.6
Youngstown, Ohio	653	221	33.8

† Includes non-federal and federal physicians.

Source: C. N. Theodore, J. N. Haug, *Selected Characteristics of the Physician Population 1963 and 1967*, American Medical Association, Chicago, 1968, Table 32.

Table D9

GRADUATES OF FOREIGN MEDICAL SCHOOLS IN SELECTED STANDARD METROPOLITAN STATISTICAL AREAS (SMSA's) 1963, 1967, 1970†

Location	1963	1967	1970
Total Number of Graduates of Foreign Schools	30,925	45,816	56,239 ††
Non-metropolitan	2,920	4,100	5,186
Metropolitan	28,005	41,716	51,053
New York City	8,215	10,999	n/a
Chicago	2,316	3,266	n/a
Philadelphia	894	1,408	n/a
Detroit	690	1,366	n/a
Boston	801	1,356	n/a
Baltimore	795	1,317	n/a
Washington, D.C.	761	1,266	n/a
Cleveland	868	1,185	n/a
Los Angeles	873	1,128	n/a
Newark, New Jersey	689	958	n/a

† Includes non federal and federal physicians.

†† 978 physicians with unknown addresses are excluded from the 1970 total for consistency with the 1963 and 1967 figures.

Source: C. N. Theodore, J. N. Haug, *Selected Characteristics of the Physician Population 1963 and 1967*, Tables 14 and 32; J. N. Haug, B. C. Martin, *Foreign Medical Graduates in the United States, 1970*, p. 14.

Table D10

FOREIGN MEDICAL GRADUATES † IN THE UNITED STATES BY ACTIVITY AND YEAR OF GRADUATION
December 31, 1970

Activity	Total Physicians	Year of Graduation											
		Prior 1920	1920 - 24	1925 - 29	1930 - 34	1935 - 39	1940 - 44	1945 - 49	1950 - 54	1955 - 59	1960 - 64	1965 - 69	1970 –
Total Physicians	57,217	639	1157	1109	1561	3620	2637	4036	7714	10565	13027	10880	272
Patient Care	48,191	268	729	808	1271	3079	2215	3334	6487	8732	10754	10259	255
Office Based	20980	225	618	603	976	2459	1535	2351	4406	4960	2529	318	-
Interns	3,050	1	-	-	2	7	16	25	83	163	481	2051	221
Residents	13,598	-	-	4	6	22	64	124	400	1138	4693	7110	32
Physician Staff	10,563	42	111	201	287	591	600	834	1598	2471	3046	780	2
Other Prof. Activity	5,951	37	78	117	176	385	352	580	1002	1342	1542	339	1
Medical Teaching	1,006	3	11	19	19	54	69	127	222	277	185	20	-
Administration	1,194	7	13	40	85	167	119	184	220	221	124	14	-
Research	1,285	20	43	43	54	127	113	227	482	745	1134	276	1
Other	466	7	11	15	18	37	31	42	78	99	99	29	-
Not Classified	276	-	1	1	-	2	2	9	22	68	64	91	16
Inactive	1,821	315	334	165	95	130	46	78	121	183	262	92	-
Address Unknown	978	19	15	18	19	24	22	35	82	240	405	99	-

† Excludes Canadian graduates.

Source: J.N. Haug, B.C. Martin, *Foreign Medical Graduates in the United States, 1970*, p. 165.

Table D11

FOREIGN MEDICAL GRADUATES IN THE UNITED STATES BY COUNTRY OF GRADUATION AND SELECTED AGE GROUPS
December 31, 1970

Country	Total (100.0%)	Age in Years					
		Under 40		40-59		60 and Over	
		Number	Percent	Number	Percent	Number	Percent
Afghanistan	19	15	78.9	4	21.1	0	0.0
Algeria	1	1	100.0	0	0.0	0	0.0
Argentina	1,313	893	68.0	406	30.9	14	1.1
Australia	325	202	62.2	114	35.1	9	2.8
Austria	1,598	90	5.3	580	34.2	1,028	60.5
Belgium	511	266	52.1	213	41.7	32	6.3
Bolivia	146	101	69.2	44	30.1	1	0.7
Brazil	377	256	67.9	116	30.8	5	1.3
Bulgaria	49	9	18.4	34	69.4	6	12.2
Burma	98	91	92.9	7	7.1	0	0.0
Ceylon	93	75	80.6	18	19.4	0	0.0
Chile	176	105	59.7	63	35.8	8	4.5
China	589	69	11.7	448	76.1	72	12.2
Colombia	952	659	69.2	282	29.6	11	1.2
Congo (Kinshasa)	1	1	100.0	0	0.0	0	0.0
Costa Rica	11	10	90.9	1	9.1	0	0.0
Cuba	17,575	192	7.0	2,145	77.8	420	15.2
Czechoslovakia	654	92	14.1	252	38.5	310	47.4
Denmark	82	32	39.0	38	46.3	12	14.5
Dominican Republic	629	276	43.9	327	52.0	26	4.1
East Germany	745	4	0.5	124	16.6	67	82.8
Ecuador	147	64	43.5	81	55.1	2	1.4
El Salvador	91	63	69.2	22	24.2	6	6.6
Ethiopia	1	1	100.0	0	0.0	0	0.0
Finland	31	13	41.9	13	41.9	5	16.1
France	685	116	16.9	295	43.1	274	40.0
Greece	813	210	25.8	551	67.8	52	6.4
Guatemala	109	91	83.5	13	11.9	5	4.6
Haiti	329	189	57.4	137	41.6	3	0.9
Honduras	49	33	67.3	16	32.7	0	0.0
Hong Kong	105	80	76.2	24	22.9	1	1.0
Hungary	862	24	2.8	457	53.0	381	44.2
Iceland	42	28	66.7	14	33.3	0	0.0
India	3,957	3,495	88.3	453	11.4	9	0.2
Indonesia	89	56	62.9	33	37.1	0	0.0
Iran	16,31	1,235	75.7	394	24.2	2	0.1
Iraq	188	115	61.2	66	35.1	7	3.7
Ireland	924	430	46.5	461	49.9	33	3.6
Israel	214	134	62.6	79	36.9	1	0.5
Italy	3,208	730	22.8	1,795	56.0	683	21.3
Jamaica	46	42	91.3	4	8.7	0	0.0
Japan	882	559	63.4	309	35.0	14	1.6
Lebanon	615	287	46.7	277	45.0	51	8.3
Malaysia	1	1	100.0	0	0.0	0	0.0
Malta	6	2	33.3	4	66.7	0	0.0

Table D11
(Continued)

FOREIGN MEDICAL GRADUATES IN THE U.S. BY COUNTRY OF GRADUATION AND SELECTED AGE GROUPS[1]

December 31, 1970

Country	Total (100.0%)	Age in Years					
		Under 40		40 - 59		60 and Over	
		Number	Percent	Number	Percent	Number	Percent
Mexico	1,821	752	41.3	1,017	55.8	52	2.9
Netherlands	726	140	19.3	534	73.6	52	7.2
New Zealand	79	37	46.8	39	49.4	3	3.8
Nicaragua	78	35	44.9	41	52.6	2	2.6
Nigeria	24	24	100.0	0	0.0	0	0.0
North Korea	5	0	0.0	4	80.0	1	20.0
North Vietnam	3	1	33.3	2	66.7	0	0.0
Norway	44	7	15.9	25	56.8	14	31.8
Pakistan	784	725	92.5	59	7.5	0	0.0
Panama	23	17	73.9	6	26.1	0	0.0
Paraguay	76	57	75.0	19	25.0	0	0.0
Peru	618	353	57.1	261	42.2	4	0.6
Philippines	7,352	5,592	76.1	1,733	23.6	27	0.4
Poland	602	117	19.4	226	37.5	259	43.0
Portugal	107	35	32.7	62	57.9	10	9.3
Rhodesia	1	1	100.0	0	0.0	0	0.0
Romania	317	47	14.8	212	66.9	58	18.3
Senegal	1	0	0.0	1	100.0	0	0.0
Singapore	23	18	78.3	4	17.4	1	4.3
South Africa	356	175	49.2	175	49.2	6	1.7
South Korea	2,095	1,721	82.1	369	17.6	5	0.2
South Vietnam	12	10	83.3	2	16.7	0	0.0
Spain	1,801	955	53.0	807	44.8	39	2.2
Sudan	2	2	100.0	0	0.0	0	0.0
Surinam	2	0	0.0	2	100.0	0	0.0
Sweden	54	18	33.3	)	61.1	3	5.6
Switzerland	2,510	496	19.8	1,454	57.9	560	22.3
Syria	173	156	90.2	17	9.8	0	0.0
Taiwan (Formosa)	976	836	85.7	138	14.1	2	0.2
Thailand	1,098	1,054	96.0	43	3.9	1	0.1
Turkey	866	163	18.8	697	80.5	6	0.7
Uganda	7	7	199,9	9	9,9	9	9,9
Union of Sov. Soc. Republics	871	3	0.3	317	36.4	551	63.3
United Arab Republic (Egypt)	732	446	60.9	281	38.4	5	0.7
United Kingdom	2,641	635	24.0	1,426	54.0	580	22.0
Uruguay	46	23	50.0	23	50.0	0	0.0
Venezuela	133	111	83.5	22	16.5	0	0.0
West Germany	3,502	690	19.7	1,623	46.3	919	26.2
Yugoslavia	405	137	33.8	231	57.0	37	9.1
	57,217	27,033	47.2	22,887	40.0	7,297	12.8

† Excludes Canadian medical graduates in the U.S.
Note: Percentages may not add due to rounding.
Source: J.N. Haug, B. C. Martin, *Foreign Medical Graduates in the United States, 1970*, pp. 294 - 5.

Table D12

DISTRIBUTION OF PHYSICIANS BY COUNTRY OF GRADUATION AND BY SEX 1963, 1967, and 1970

1963			
Graduates of	Total	Female	Percent Female
United States	238,571	13,060	5.5
Canada	5,644	321	5.7
Other Countries	30,925	3,941	12.7
Total	275,140	17,322	6.3

1967			
Graduates of	Total	Female	Percent Female
United States	255,104	14,496	5.7
Canada	6,050	390	6.4
Other Countries	45,816	6,518	14.2
Total	306,970	21,404	7.0

1970			
Graduates of	Total	Female	Percent Female
United States	270,631	16,193	6.0
Canada	6,174	431	7.0
Other Countries	57,217	8,777	15.3
Total	334,028	25,401	7.6

Source: C. N. Theodore, J. N. Haug, *Selected Characteristics of the Physician Population in 1963 and 1967*, pp. 49, 189; J. N. Haug, B. C. Martin, *Foreign Medical Graduates in the United States, 1970*, p. 21.

E. Hospital staffing and other manpower factors in the United States relating to the employment of foreign medical graduates.

Table E1

APPLICATIONS TO U.S. MEDICAL SCHOOLS
1947 – 1970

1st Year Class	Applicants	Total Number of Applications	Applications Per Individual	Accepted Applicants	Applications/ Acceptance Ratio
1947 - 1948	18,829	56,279	3.0	6,512	2.9
1948 - 1949	24,242	81,662	3.4	6,973	3.5
1949 - 1950	24,434	88,244	3.6	7,150	3.4
1950 - 1951	22,279	81,931	3.7	7,254	3.1
1951 - 1952	19,920	70,678	3.5	7,663	2.6
1952 - 1953	16,763	56,319	3.4	7,778	2.2
1953 - 1954	14,678	48,586	3.3	7,756	1.9
1954 - 1955	14,538	47,568	3.6	7,969	1.9
1955 - 1956	14,937	54,161	3.6	7,969	1.9
1956 - 1957	15,917	59,798	3.8	8,263	1.9
1957 - 1958	15,791	60,951	3.9	8,302	1.9
1958 - 1959	15,170	59,102	3.9	8,366	1.8
1959 - 1960	14,952	57,888	3.9	8,512	1.8
1960 - 1961	14,397	54,662	3.8	8,550	1.7
1961 - 1962	14,381	58,834	3.7	8,682	1.7
1962 - 1963	15,847	59,054	3.7	8,959	1.8
1963 - 1964	17,668	70,063	4.0	9,063	1.9
1964 - 1965	19,168	84,578	4.4	9,043	2.1
1965 - 1966	18,703	87,111	4.7	9,012	2.1
1966 - 1967	18,250	87,627	4.8	9,123	2.0
1967 - 1968	18,724	93,332	5.0	9,702	1.9
1968 - 1969	21,117	112,195	5.3	10,092	2.1
1969 - 1970	24,465	134,557	5.5	10,514	2.3
1970 - 1971	24,987	148,797	6.0	11,500	2.2

Source: "Medical Education in the United States", *Journal of the American Medical Association, 218* (1971), 1217.

Table E2

NUMBER OF APPROVED INTERNSHIPS OFFERED IN THE UNITED STATES AND ITS TERRITORIES AND POSSESSIONS IN RELATION TO GRADUATES OF U.S. MEDICAL SCHOOLS: Selected Years 1939 - 1970

Year †	Internships Offered	Medical Graduates	Internships per Medical Graduate
1939 - 1940	6,684	5,089	1.3
1949 - 1950	9,124	5,094	1.8
1954 - 1955	11,048	6,861	1.6
1955 - 1956	11,616	6,977	1.7
1956 - 1957	11,895	6,845	1.7
1957 - 1958	12,325	6,796	1.8
1958 - 1959	12,469	6,861	1.8
1959 - 1960	12,580	6,860	1.8
1960 - 1961	12,547	7,081	1.8
1961 - 1962	12,074	6,994	1.7
1962 - 1963	12,024	7,168	1.7
1963 - 1964	12,229	7,264	1.7
1964 - 1965	12,728	7,336	1.7
1965 - 1966	12,954	7,409	1.7
1966 - 1967	13,569	7,574	1.8
1967 - 1968	13,761	7,743	1.8
1968 - 1969	14,112	7,973	1.8
1969 - 1970	15,003	8,058	1.9
1970 - 1971	15,354	8,367	1.8

† For year ending in June before the intern year.

Source: 1940 - 1960 figures from William H. Stewart and Marion E. Altenderfer, *Health Manpower Source Book, Hospital House Staffs*, Public Health Service Publication No. 263, Section 13, Table 4. 1961 - 70 figures from *Journal of the American Medical Association*, Educational Numbers.

Table E3

GRADUATES OF FOREIGN MEDICAL SCHOOLS IN THE UNITED STATES BY YEAR OF GRADUATION AND HOSPITAL POSITION December 1970

Year of Graduation	Total	Number Working in Hospitals			Percent of FMGs Working in Hospitals
		In Training	Fulltime Staff	Total	
Prior 1920	639	1	31	32	6.7
1920 - 1924	1,157	–	111	111	9.6
1925 - 1929	1,109	4	201	205	18.5
1930 - 1934	1,561	8	287	295	18.9
1935 - 1939	3,620	29	591	620	17.1
1940 - 1944	2,637	80	600	680	25.8
1945 - 1949	4,036	149	834	983	24.4
1950 - 1954	7,714	483	1,598	2,081	27.0
1955 - 1959	10,565	1,301	2,471	3,772	35,7
1960 - 1964	13,027	5,179	3,046	8,225	63.1
1965 - 1969	10,880	9,161	780	9,941	91.4
1970	272	253	2	255	93.8
Total	57,217	16,648	10,563	27,211	47.6

Source: J.N. Haug, B.C. Martin, *Foreign Medical Graduates in the United States, 1970*, p. 165.

Table E4

NUMBER OF PHYSICIANS EMPLOYED AND ADDITIONAL POSITIONS NEEDED TO PROVIDE OPTIMUM PATIENT CARE IN HOSPITALS IN THE UNITED STATES† 1969

Interns and Residents	Number
A. Total employed	55,000
Full time	52,500
Part-time	2,500
B. Additional positions needed	5,200
Budgeted positions vacant	4,100
Other positions	1,100
Other Physicians	
A. Total employed	58,200
Full time	39,700
Part-time	18,500
B. Additional positions needed	4,800
Budget positions vacant	2,700
Other positions	2,100
Total Deficiency	10,000

† From a survey of hospitals conducted by the Bureau of Health Professions Education and Manpower Training, U.S. Department of Health, Education, and Welfare, in collaboration with the American Hospital Association and National Center for Health Statistics.

The survey report advises care in interpreting the figures shown for physicians. The large number of part-time employed staff physicians (18,500) may reflect errors in reporting and inclusions of some physicians usually considered to be in other basic practice. These figures also include federal physicians in hospital-based practice outside the United States.

Source: "Preliminary Tabulations from the Survey of Health Manpower in Hospitals," U.S. Department of Health, Education, and Welfare, National Institutes of Health, Bureau of Health Professions Education and Manpower Training, *Health Manpower Resources*, July 1970.

Table E5

ESTIMATED NUMBER OF AMERICANS ENROLLED IN 16 MEDICAL SCHOOLS IN MEXICO AND EUROPE October 1969

Country	Schools	Students in Admitting Class		Americans in All Medical.	Graduates 1969	
		Total	Americans Only	Schools	Total	Americans Only
Mexico†	1	1,030	270	572	158	11
Spain†	4	1,695	170	486	1,016	14
Italy	3	3,317	75	821	946	86
Switzerland	5	823††	29	210	775	30
Belgium	3	1,302	99	254	445	19
Total	16	9,367	743	2,343	3,130	162

† Does not include at least 500 Puerto Ricans attending Mexican and especially Spanish schools.

†† Because of manner in which Swiss schools keep records, this is not the entering class, but class completing the anatomy-physiology course sequence (i.e., equivalent to sophomore class in U.S. schools).

Source: Henry R. Mason, "Foreign Medical Schools as a Resource for Americans," *Journal of the National Association of College Admissions Counselors, 15* (1970), No. 3.

Table E6

NUMBER OF STUDENTS TRANSFERRING FROM FOREIGN TO U.S. MEDICAL SCHOOLS 1960 - 1970

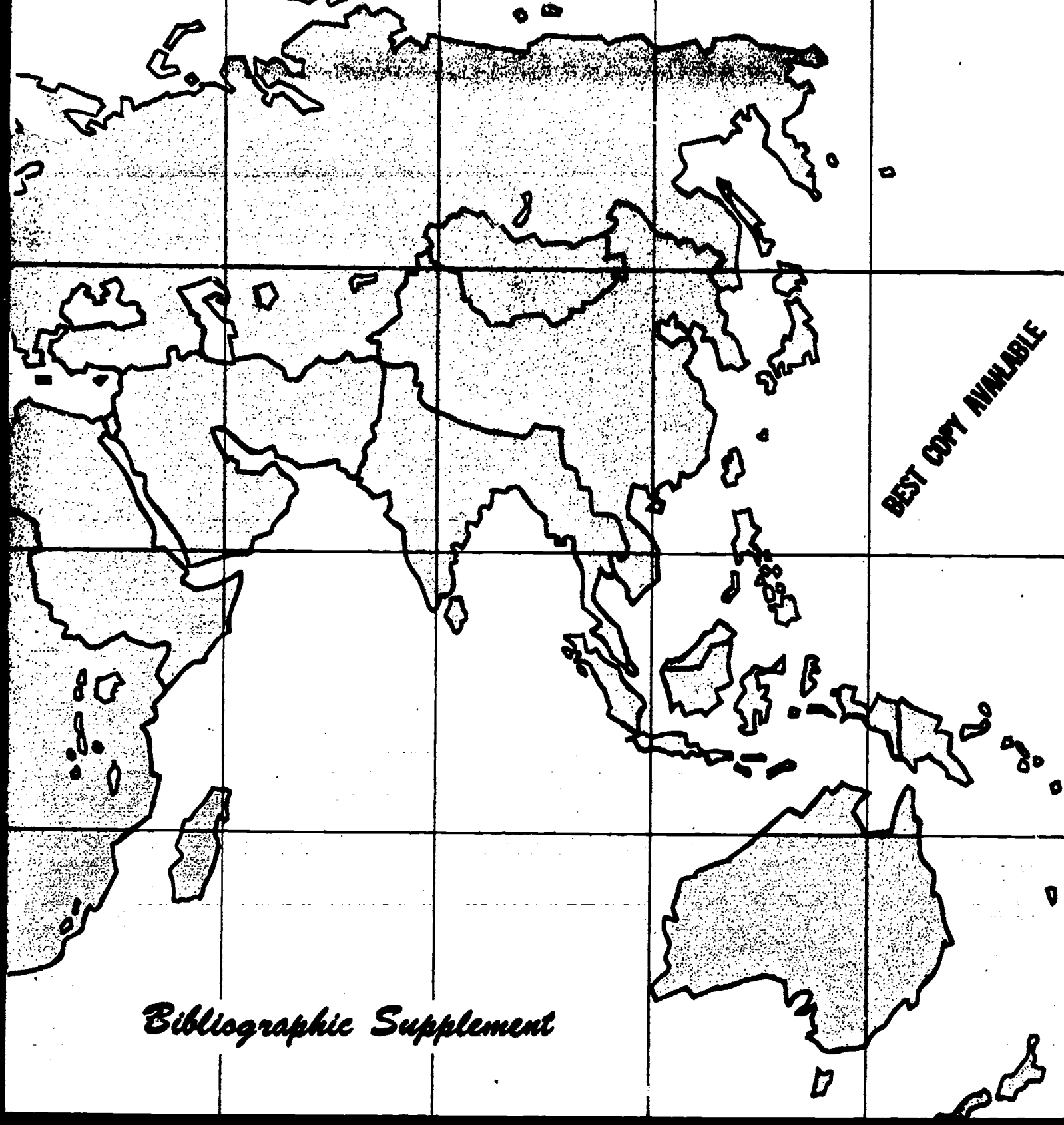
Academic Year	Number of Students Transferring
1960 - 61	30
1961 - 62	41
1962 - 63	43
1963 - 64	36
1964 - 65	31
1965 - 66	24
1966 - 67	23
1967 - 68	33
1968 - 69	40
1969 - 70	76
1970 - 71	139
Total	516

STUDENTS TRANSFERRING FROM FOREIGN TO U.S. MEDICAL SCHOOLS BY YEAR OF CLASS

Year	1968-1969	1969-1970	1970-1971
2nd Year	20	26	29
3rd Year	20	49	108
4th Year	0	1	2
Total	40	76	139

Source: "Medical Education in the United States," *Journal of the American Medical Association, 218* (1971), 1219,1220.

☆ U.S. GOVERNMENT PRINTING OFFICE : 1973 O - 507-732



Bibliographic Supplement

FOREIGN TRAINED PHYSICIANS AND AMERICAN MEDICINE

I. Statistical Sources

"Annual Report on Graduate Medical Education in the United States," *Directory of Approved Internships and Residencies*, Chicago, American Medical Association (issued annually).

Department of Health, Education, and Welfare, Public Health Service, National Institutes of Health, *Health Manpower Source Book Series*; U.S.P.H.S. Publication No. 263, Sections 1-21, Washington, D.C., Government Printing Office (issued periodically).

Educational Council for Foreign Medical Graduates, *Annual Report*, Philadelphia (issued annually).

Haug, J.N. and Martin, B.C., *Foreign Medical Graduates in the United States, 1970*, Special Statistical Series, Chicago, American Medical Association, 1971.

Institute of International Education, *Open Doors*, New York (issued annually).

"Medical Education in the United States," Annual Report of the AMA Council on Medical Education, Education Number, *Journal of the American Medical Association* (issued annually).

"Medical Licensure Statistics," Annual Report of the AMA Council on Medical Education, Medical Licensure Number, *Journal of the American Medical Association* (issued annually).

National Science Foundation, *Scientists, Engineers and Physicians from Abroad*, Washington, D.C. (issued periodically).

Theodore, C.N., Haug, J.N., and Martin, B.C., *Selected Characteristics of the Physician Population, 1963 and 1967*, Special Statistical Series, Chicago, American Medical Association, 1968.

Theodore, C.N., Sutter, G.E., and Haug, J.N., *Medical School Alumni, 1967*, Special Statistical Series, Chicago, American Medical Association, 1968.

II. Government Documents

The Brain Drain Into The United States of Scientists, Engineers, and Physicians. A Staff Study for the Research and Technical Programs Subcommittee of the Committee on Government Operations. House of Representatives, 90th Cong., 1st Sess., July 1967.

Foreign Educational Benefits and Surplus Property. Hearing Before a Subcommittee of the Committee on Military Affairs on S. 1440 and S. 1636. United States Senate, 79th Cong., 2nd Sess., February 25, 1946.

Foreign Education Benefits and Surplus Property. Report of the Committee on Military Affairs. To Accompany S. 1636. United States Senate, 79th Cong., 2nd Sess., March 12, 1946.

Hearings Before the Committee on Foreign Relations, United States Senate, 87th Cong., 1st Sess. on S. 1154: A Bill to Provide for the Improvement and Strengthening of the International Relations of the United States by Promoting Better Mutual Understanding Among the Peoples of the World Through Educational and Cultural Exchanges, March 29 and April 27, 1961.

Hearings Before Subcommittee No. 1 of the Committee on the Judiciary, House of Representatives, 91st Cong., 2nd Sess. on H.R. 9112, H.R. 15092, H.R. 17370: To Amend the Immigration and Nationality Act, and for Other Purposes. July 16, 22, 29, August 5 and 6, 1970.

Hearings Before the Subcommittee on State Department Organizations and Foreign Operations of the Committee on Foreign Affairs, House of Representatives, 87th Cong., 1st Sess. on H.R. 5203 and H.R. 5204. Providing for the Improvement and Strengthening of the International Relations of the United States by Promoting Better Mutual Understanding Among the Peoples of the World Through Educational and Cultural Exchanges, May 25, June 1, 2,6, and 9, 1961.

Immigration Aspects of the International Educational Exchange Program. Report of Subcommittee No. 1 of the Committee on the Judiciary, House of Representatives, Pursuant to H. Res. 56. July 17, 1961. 87th Cong., 1st Sess., Report No. 721.

Mutual Educational and Cultural Exchange Act of 1961. Conference Report to Accompany H.R. 8666. House of Representatives, 87th Cong., 1st Sess., September 15, 1961, Report No. 1197.

Mutual Educational and Cultural Exchange Act of 1961. Reports of Committee on Foreign Relations on S. 1154. United States Senate, 87th Cong., 1st Sess., June 14, 1961, Report No. 372.

Mutual Educational and Cultural Exchange Act of 1961. Report to Accompany H.R. 8666. Committee on Foreign Affairs, House of Representatives, 87th Cong., 1st Sess., August 31, 1961, Report No. 1094.

Public Law 80-402. 80th Cong., H.R. 3342 January 27, 1948. United States Information and Educational Exchange Act of 1948.

Public Law 87-256. 87th Cong., H.R. 8666, September 21, 1961. Mutual Educational and Cultural Exchange Act of 1961.

National Advisory Commission on Health Manpower. "Report of the Panel on Foreign Medical Graduates," *Report of the National Advisory Commission on Health Manpower*, Vol. II, Washington, D.C., U.S. Government Printing Office, November 1967.

Report 811, Calendar 861. U.S. Senate, 80th Cong., 2nd Sess.

Committee on Foreign Relations. January 7, 1948. "Promoting the Better Understanding of the United States Among the Peoples of the World and to Strengthening Cooperative International Relations."

Some Facts and Figures on the Migration of Talent and Skills. Prepared by the Staff of the Council on International Educational and Cultural Affairs, Charles Frankel, Asst. Sec. for Educational and Cultural Affairs, Chairman. Department of State. March 1967.

U.S. Senate, 87th Cong., 1st Sess., Committee on Foreign Relations, Section-by-Section Analysis of Mutual Educational and Cultural Exchange Bill (S. 1154). March 10, 1961.

U.S. Senate, 80th Cong., 1st Sess., Committee on Foreign Relations, United States Information and Educational Exchange Act of 1947. Hearings before a Subcommittee on H.R. 3342. July 2, 3, 5, 1947.

III. Journal Articles: 1952-1964

"Foreign Doctors in the USA," *Lancet, i* (1961), 43-44.

"Foreign Interns and Residents," *California Medicine* (1957), 416- 17.

"Reports on the Committee on International Relations in Medical Education, Association of American Medical Colleges," *Journal of Medical Education, 28* (1953), 49.

"The ECFMG," *Journal of the American Medical Association, 174* (1960), 814-16.

Arnott, W. M., "Impressions of Graduate Medical Education in U.S.A., with special reference to Harvard Medical School," *British Medical Journal, ii* (1952), 461-63.

Baldridge, R. R., "The Problem of the Foreign Trained Physician," *Rhode Island Medical Journal* (1957), 91-95.

Barnes, F. W. and Futcher, P. H., "Preparation in the United States of Foreign Medical Graduates for Academic Careers Abroad," *Journal of Medical Education, 37* (1962), 1252-57.

Bearse, C., "Foreign Residents and Interns in Massachusetts' Hospitals," *New England Journal of Medicine, 262* (1960), 1014-18.

Berry, F. B., "The Foreign Intern and Resident," *Surgery, Gynecology, Obstetrics* (1959), 105- 06.

Blalock, A., "Our Obligations and Opportunities; Address of President," *Bulletin of the American College of Surgeons, 40* (1955), 83-86.

Boggs, R., "Supplementary Medical Education for Immigrant Physicians," *Proceedings of the Annual Congress on Medical Educatior and Licensure*, (1955), 84-92.

Bonnemaison, M. F., "A South American Looks at a North American Residency," *Journal of the American Medical Association, 186* (1963), 503.

Burgess, A. M., "Foreign-Trained Physicians in Community Hospitals. A Report on the Quality of the FMG in the United States as Evaluated by 45 Directors of Medical Education," *Medical Times, 90* (1962), 808-12.

Combs, J. J., "The Problem of Graduates of Foreign Medical Schools as Related to Universal Endorsement and Reciprocity," *Federation Bulletin, 50* (1963), 316-22.

Curren, J. A., "Internships and Residencies: Historical Background and Current Trends," *Journal of Medical Education, 34* (1959), 873-84.

Diehl, H. S., Crosby, E. L., and Kaetzel, P. K., "Alien Physicians Training in Hospitals in the United States," *Journal of the American Medical Association, 156* (1954), 1-2.

Emment, J. M., "The FMG," *Virginia Medical Monthly, 87* (1960), 539-40.

Ezell, S. D., "Development and Role of Supplementary Medical Education in Foreign Graduate Problem," *Journal of Medical Education, 31* (1956), 236-40.

Ezell, S. D., "Evaluation of Foreign Medical Credentials," *Proceedings of the Annual Congress on Medical Education and Licensure*, (1954), 61-65.

Foraker, A. G., "FMG's," *New England Journal of Medicine, 268* (1963), 621- 24.

Fox, J. I. and Doyle, P. M., "The Foreign-Trained Intern in the Emergency Room," *Journal of the Michigan Medical Society, 6* (1961), 902- 05.

Greene, P., "An American Internship," *Journal of the Irish Medical Association, 47* (1960), 115- 16.

Grzegorzewski, E., "International Cooperation in Post-Graduate Education – Cross Fertilization of Ideas," *Journal of the American Medical Association, 170* (1959), 2157-59.

Guilbert, J. J., "Internship, Residency and Research Placements of Foreign Medical Graduates in U.S. Hospitals – Survey and Recommendations." *Journal of Medical Education, 37* (1960), 1172-76.

Hamilton, T. S., "The Foreign Trained Physician; A Joint Approach to a Multi-Faceted Problem," *Hospitals, 31* (1957), August, 32.

Hamilton, T. S., "Hospitals and Graduates of Foreign Medical Schools," *Hospitals, 34* (1960), April, 55-60.

Hickcox, C. B., "Problems in Residency Training for Graduates of Medical Schools Outside the United States and Canada," *Proceedings of the Annual Congress on Medical Education and Licensure*, (1955), 78-80.

Kilough, R. C., Jr. and Ezell, S. D., "Licensure Problems of the FMG," *Hospitals, 26* (1952), 102.

Kinsman, J. M., "Educational Council for Foreign Medical Graduates," *Federation Bulletin* (1957), 217-20.

Kirsch, E., "Proposed Modification of Foreign Physician Program. A Program to Facilitate Certification of Foreign

Physicians So That They May Serve as Interns in the U.S.," *Journal of the American Medical Association, 176* (1961), 630-35.

Leonard, J. C., "The FMG and the ECFMG," *Connecticut Medicine, 26* (1962), 108-14.

Leonard, J. C. and Clemans, W. V., "The Foreign Graduate and the Educational Council for Foreign Medical Graduates. Criticisms of the ECFMG," *Journal of the American Medical Association, 176* (1961), 1013-16.

Ley, A. B., "Intern Shortage, Foreign Graduate and Law." *Journal of Medical Education, 28* (1953), 31-34.

Long, P. H., "The Problem of Foreign Medical Graduates. II: Let's Do Something About It!" *Medical Times, 89* (1961), 525-28.

McCormack, J. E., "The Problem of the Foreign Physician," *Journal of the American Medical Association, 155* (1954), 818-23.

McCormack, J. E. and Feraru, A., "Alien Interns and Residents in the United States, 1955-1956," *Journal of the American Medical Association, 158* (1955), 1357-60.

McCormack, J. E. and Feraru, A., "Foreign Interns and Residents in the United States, 1956-1957," *Journal of the American Medical Association, 161* (1956), 322-24.

Manlove, F. R., "American Students in Foreign Medical Schools," *Journal of the American Medical Association, 150* (1952), 70.

Maurillo, D. F., "Licensing of Foreign Physicians in New York State and in the United States," *New York Journal of Medicine, 56* (1956), 2070-74.

O'Brien, H. R., "International Responsibilities and Opportunities in Relation to Foreign Medical Education," *Journal of Medical Education, 29* (1954), 25-29.

Rappleye, W. C., "Educational Component of Medical Licensure (Especially in Relation to Graduates of Foreign Schools)," *Journal of the American Medical Association, 154* (1954), 1212-13.

Rappleye, W. C., "The Foreign Graduate Problem," *Hospitals, 35* (1961), February, 54-59.

Reid, A. C., "The New England Hospital International Education Program," *Journal of the American Medical Women's Association*, (1956) 405-06.

Smiley, D.F., "Educational Council for Foreign Medical Graduates," *Medical Times* (1958), 623-28.

Smiley, D. F., "Educational Council for Foreign Medical Graduates Gets Under Way," *Journal of the American Medical Association, 167* (1958), 538-40.

Smiley, D. F., "The Educational Council for Foreign Medical Graduates," *Journal of the American Medical Association, 170* (1959), 534-35.

Smiley, D. F., "The ECFMG Finishes Its First Year," *Medical Annals of the District of Columbia* (1959), 163-66.

Smiley, D. F., "The Challenge Presented by the Foreign Graduate," *Rhode Island Medical Journal, 43* (1960), 510-12.

Smiley, D. F., "The ECFMG: A Report of Its First Four Years," *Journal of Medical Education, 37* (1962), 1031-37.

Smyth, F. S., "Our International Responsibility in Medical Education," *Journal of Medical Education, 26* (1951), 360-63.

Stein, J. J., "Foreign Medical School Graduates; Problems of Qualifying as Competent to Practice," *California Medicine, 83* (1955), 22-26.

Vaughn, D. J., "The Training of the Physician. The Recruitment and Medical Training of Men and Women in England in 1964," *New England Journal of Medicine, 271* (1964), 294-97.

Wallace, H. M. and Hunt, E. P., "Study of Foreign Physicians Who Have Maternal and Child Health Training in U.S. Schools of Public Health," *Journal of Medical Education, 39* (1964), 531-39.

West, K. M., "Training for Medical Research: The World Role of the United States," *Journal of Medical Education, 39* (1964), 237-64.

Wolman, I. J., "American Hospitals and Foreign Medical School Graduates," *Quarterly Review of Pediatrics, 15* (1960), 125-28.

Wright, R. D., "A Commentary on Preparation in the United States of FMG's for Academic Careers Abroad," *Journal of Medical Education, 38* (1963), 511-13.

IV. Journal Articles: 1965-1972

"Americans in Foreign Medical Schools," *Journal of the American Medical Association, 217* (1971), 1857.

"The Blight and the Plight," *Journal of the American Medical Association, 212* (1970), 312-13.

"The Foreign Medical Graduate," *Journal of the Louisiana Medical Society, 121*, (1969), 388-90.

"The Foreign Medical Graduate – Responsibilities and Liabilities," *Journal of Medical Education, 44* (1969), 314-16.

"Foreign Medical Graduates," *Journal of the American Medical Association, 218 (1971), 588-89.*

"Foreign-Trained Full-Time Faculty in United States Medical Schools," *Journal of Medical Education, 45* (1970), 185.

"Manpower for the World's Health. Report of the 1966 Institute on International Medical Education," *Journal of Medical Education, 41* (1966), September, Suppl., vi-xvi, 1-344.

"The Medical Manpower Shortage," *Journal of the American Medical Association, 217* (1971), 1857-59.

"Migration of Doctors," *Lancet*, ii (1970), 1071-72.
"Migration of Doctors," *New Zealand Medical Journal*, 71 (1970), 164-65.
Antler, L., "Correlates of Home and Host Country Acquaintanceship Among Foreign Medical Residents in The United States," *Journal of Social Psychology*, *80* (1970), 49-57.
Antler, L. and Halberstam, J. L., "Why Foreign Medical Residents Came to the United States: The Relationship Between Cultural and Vocational Factors and the Decision to Obtain Medical Training Abroad," *British Journal of Medical Education*, 3 (1969), 15-22.
Antler, L. and Zaretsky, H. H., "National Consciousness Among Foreign Physicians in the United States: Correlates in Attitude, Adjustment, Personality, and Demographic Variables," *Journal of Social Psychology*, *71* (1967), 209-20.
Aumiller, J., "The American Educational Certificate for Foreign Medical Graduates," *Miinchener Medizinische Wochenschrift*, *110* (1968), 1816-19.
Baltazak, A., "Some Further Comments by FMG's on the ABPN," *American Journal of Psychiatry*, *126* (1970), 1678-79.
Belsasso, G., T[illegible], L.L., and Tapia, H.L., "Determining Factors in Migration and Adaptation of Mexican Psychiatrists to the United States: A Mexican Viewpoint," *American Journal of Psychiatry*, *126* (1970), 1318-21.
Boesten, H., "Experience of a German Intern at a University Psychiatric Clinic in the U.S.A.," *Nervenarzt*, *41* (1970), 444-51.
Butter, I., "The Migratory Flow of Doctors To and From the United States," *Medical Care*, *9* (1971), 17-31.
Butter, I. and Grenzke, J., "Training and Utilization of Foreign Medical Graduates in the United States," *Journal of Medical Education*, *45* (1970), 607-17.
Butter, I. and Schaffner, R., "Foreign Medical Graduates and Equal Access to Medical Care," *Medical Care*, *9* (1971), 17-31.
Butter, I. and West, K. M., "British-Educated Physicians in the U.S.A.," *British Medical Journal*, *ii* (1969), 122.
Cahill, K. M., "Tropical Disease Training for Foreign Physicians in the United States," *Journal of the Irish Medical Association*, *62* (1969), 107-08.
Cordice, J. W., Jr., "Medical Education: Role of the Foreign Physician in the United States of America," *Journal of the National Medical Association*, *59* (1967), 260-64.
Cox, R. M., "Facts Regarding Employment and Licensure of Graduates of Foreign Medical Schools," *Virginia Medical Monthly*, *96* (1969), 456.
Dangerfield, R., "Issues Involved in Overseas Assistance: Interinstitutional Relations on Medical Education," *Journal of Medical Education*, *41* (1966), September, Suppl., 205-14.

Dacso, M. M., Antler, L., and Rusk, H. A., "The Foreign Medical Resident Training in the United States," *Annals of Internal Medicine, 68* (1968), 1105-13.

DeVault, V. T. and Owen, G., "U.S. Visa Policies Relating to Doctors and Medical Students," *Bulletin of the American College of Surgeons* (March-April 1968).

Djernes, B. and Djernes, M., "Young Physicians in the USA," *Ugeskrift for Laeger, 132* (1970), 245-48.

Dublin, T.D., "The Migration of Physicians to the United States," *New England Journal of Medicine,* 286 (1972), 870-77.

Duff, S. L. and Fish, D.G., "Canadian-Trained Physicians in United States Internships and Residencies: 'Operation Retrieval' and Report of Statistics, 1966-1968," *Canadian Medical Association Journal, 102* (1970), 291-95.

Evans, J. P., "Notes on the Foreign Medical Graduate Problem in North America," *British Journal of Medical Education, 4* (1970), 249-51.

Evans, J. P. and Rossin, A. D., "The Fate of Foreign Medical Graduates in Neurological Surgery," *Journal of Neurosurgery, 30* (1969), 356-58.

Evans, J. P. and Rossin, A. D., "The Significance for Neurology of a Recent Survey of Foreign Medical Graduates in Neurological Surgery and in Pediatrics," *Transactions of the American Neurological Association, 94* (1969), 259-61.

Foraker, A. G., "A Positive Approach to the Foreign Pathology Resident," *Archives of Pathology, 88* (1969), 453-54.

Garroway, W. M., "British Medical Students in the U.S.A.," *British Journal of Medical Education, 3* (1969), 215-20.

Gish, O., "Assessing Commonwealth Trained Doctors for the N.H.S." *Social and Economic Administration, 3* (1969), 264-72.

Gish, O., "Emigration and the Supply and Demand for Medical Manpower: The Irish Case," *Minerva 4* (1969), 668-79.

Gish, O., "Medical Education and the Brain Drain," *British Journal of Medical Education, 3* (1969), 11-14.

Gish, O. "Britain and America: Brain Drains and Brain Gains," *Social Science and Medicine, 3* (1970), 397-400.

Gish, O. "Medical Education and Medical Migration," *Proceedings of the Royal Society of Medicine, 63,* Suppl. (1970), 1191-95.

Gish, O. and DeMaar, M.J.A., "Graduates of British and Irish Medical Schools Taking State Board Examinations in America," *British Journal of Medical Education, 3* (1969), 221-24.

Gish, O. and Robertson, A., "Britian's Medical 'Brain Gain': Where Immigrant Doctors Go and Why," *New Statesman* (March 14, 1969).

Gish, O. and Wilson, J. A., "Emigrating British Physicians," *Social Science and Medicine, 3* (1970), 495-511.

Goodall, J., "Does the Grass Grow Greener? Hospital Life in America," *Lancet, i* (1966), 641-50.

Greeley, D. M., "American Foreign Medical Graduates," *Journal of Medical Education, 41* (1966), 641-50.

Grillo, H. C., "A Program of Regional Collaboration in Surgical Education for Foreign Medical Graduates," *Journal of Medical Education, 41* (1966), 865-69.

Halberstam, J. L., Antler, L., and Rusk, H. A., "Foreign Interns in Community Hospitals," *Journal of Medical Education, 46* (1971), 504-17.

Halberstam, J. L. and Dacso, M. M., "A Cross-Cultural Evaluation of Graduate Medical Training in Physicial Medicine and Rehabilitation by Foreign and United States Residents," *Archives of Physicial Medicine and Rehabilitation, 47* (1966), 621-32.

Halberstam, J. L. and Dacso, M. M., "Foreign and United States Residents in University-Affiliated Teaching Hospitals: An Investigation of United States Graduate Medical Education," *Bulletin of the New York Academy of Medicine, 42* (1966), 182-208.

Halberstam, J. L., Rusk, H. A., and Taylor, E. J., "Foreign Surgical Residents in University-Affiliated Hospitals: A Unique Case in United States Graduate Medical Education," *Annals of Surgery, 171* (1970), 485-500.

Hirsch, E. O., "An Evaluation of the Internship Experience in New Jersey Hospitals (1966-1967). A Venture in Voluntary Regional Cooperation," *Journal of the American Medical Association, 209* (1969), 2031-34.

Hodari, A. A., "Graduate Education of the Foreign Physician in Obstetrics and Gynecology in the United States," *Obstetrics and Gynecology, 33* (1969), 443-47.

Hunt, G. H., "The Brain Drain in Medicine," *Medical Annals of the District of Columbia, 35* (1966), 441-42.

Hunt, G. H., "Medical Education and American Students at Guadalajara and Bologna," *Journal of the American Medical Association, 218* (1971), 869-71.

Kolb, L. C., "The Matter of Bias in the American Board of Psychiatry and Neurology," *American Journal of Psychiatry, 126* (1969), 888-91.

Kosa, J., "The Foreign-Trained Physician in the United States," *Journal of Medical Education, 44* (1969), 46-51.

Lawson, R. B., "The Role of the University in Graduate Medical Education. 2. Pediatric Training Programs," *Journal of Medical Education, 44* (1969), 874-77.

Lewis, D. J., "Canadian Training for Residents from Developing Countries," *Canadian Psychiatric Association Journal, 15* (1970), 111-13.

Lutterbeck, E. F., "Experience With Foreign Student Educational Externship in the United States," *Journal of the American Medical Association, 213* (1970), 2063-65.

Lyons, R. D., "Foreign Physicians, Many Unqualified, Fill Vacuum in U.S.," *The New York Times* (September 29, 1967).

McGuinness, A. C., "ECFMG Examinations. United States Citizen Candidate Performance," *Journal of the American Medical Association, 214* (1970), 1685-86.

Maguigad, L. C. and Kolb, L. C., "The FMG Controversy Continues," *American Journal of Psychiatry, 127* (1970), 391-92.

Margulies, H., "The Foreign Medical Graduate and the United States," *Journal of Medical Education, 41* (1966), September, Suppl., 246-51.

Margulies, H., "FMG's: An Unsolved Crisis in U.S. Hospitals," *Hospital Progress, 49* (1968), 70-82.

Margulies, H., Bloch, L. S., and Cholko, F. K., "Random Survey of U.S. Hospitals With Approved Internships and Residencies: A Study of the Professional Qualities of FMG's," *Journal of Medical Education, 43* (1968), 706-16.

Marsh, G. G. and Halberstam, J. L., "Personality Stereotypes of United States and Foreign Medical Residents," *Journal of Social Psychology, 68* (1966), 187-96.

Marshall, R. J., "Foreign Training of U.S. Medical Students," *Journal of Medical Education, 44* (1969), 1175.

Mason, H. R., "A Profile of 314 Americans Graduating From Foreign Medical Schools," *Journal of the American Medical Association, 209* (1969), 1196-99.

Mason, H. R., "Foreign Medical Schools: Organization and Expenditures in 13 Schools Attended by More Than 2,000 U.S. Students," *Journal of the American Medical Association, 217* (1971), 1845-46.

Mason, H. R. and Ruhe, C. H. W., "Students Transferring from Foreign to U.S. Medical Schools in Advanced Standing, 1959-1966," *Journal of Medical Education, 44* (1969), 561-70.

Mittal, N.S., "Training Psychiatrists from Developing Nations," *American Journal of Psychiatry, 126* (1970), 1143-49.

Ogura, K., "Foreign Doctors in the United States," *Mental Hygiene, 50* (1966), 446-51.

Overstreet, S. A., "Foreign Medical Trainees," *Journal of the Kentucky Medical Association, 68* (1970), 115-16.

Pasamanick, B., "American International Medical Immorality," *American Journal of Orthopsychiatry, 40* (1970), 11-13.

Peterson, O. L. and Bendixe, H. H., "A Critique of Graduate Medical Education in Community Hospitals," *Journal of Medical Education, 44* (1969), 762-67.

Prywes, M., "The 'Brain Drain' -- An Impromptu Discussion," *Israel Journal of Medical Sciences, 4* (1968), 698-710.

Rifka, G. E. and Churchill, C. W., "Loss of Medical Manpower in a Developing Country," *Journal of Medical Education, 44* (1969), 1144-49.

Rosenheim, M., "The Role of the United Kingdom in World Medicine," *Proceedings of the Royal Society of Medicine, 63* (1970), Suppl., 1208-13.

Schwartz, H., "Doctor Surplus Ahead?" *The New York Times* (November 29, 1971).

Schweisheimer, W., "Foreign Hospital Physicians in the USA," *Landarzt, 44* (1968), 389-90.

Severo, R., "3,000 U.S. Medical Students at School Abroad," *The New York Times* (December 28, 1971).

Singer, A., "A British View of the American Surgical Residency," *British Journal of Medical Education, 1* (1967), 287-89.

Sodeman, W. A., "The American Student Abroad: Can We Bring Him Back Earlier?" *Journal of the American Medical Association, 218* (1971), 872-73.

Sutnick, A. I., "First Symposium on the Problems of Foreign Medical Graduates," *Journal of the American Medical Association, 213* (1970), 2241-46.

Sutnick, A. I., "Medical Ambassadors," *Archives of Environmental Health, 18* (1969), 4-6.

Sutnick, A. I., "The Trainee from Abroad," *Annals of Internal Medicine, 68* (1968), 1127-28.

Thomson, M. J., "An Alternative," *American Journal of Psychiatry, 127* (1970), 392.

Thomson, M. K., "The Problem of FMG's Who Wish to Practice in the United States," *American Journal of Psychiatry, 126* (1970), 1509-10.

Varma, S. C., "An FMG Examines the American Board of Psychiatry and Neurology," *American Journal of Psychiatry, 126* (1970), 1509.

Watson, R. B., "Patterns and Effectiveness of Past and Present Overseas Programs of Cooperation in Medical Education and Forecast of the Future," *Journal of Medical Education; 41* (1966), September, Suppl., 189-204.

Wedgwood, R. J., "The Education of Foreign Medical School Graduates," *Pediatrics, 46* (1970), 760-66.

Wellington, J. S., "Indonesian Physicians Studying Abroad," *Journal of Medical Education, 43* (1968), 1183-91.

Wellington, J. S., "Malaysian Physicians' Evaluation of Their Training Abroad," *Journal of Medical Education, 44* (1969), 919-24.

West, K. M., "Foreign Interns and Residents in the United States," *Journal of Medical Education, 40* (1965), 1110-29.

West, K. M., "Physician Brain-Drain," *Medical Opinion and Review, 4* (1968).

West, K. H., "Some Opinions and Myths Concerning Foreign Medical Graduates," *Federation Bulletin, 56* (1969), 338-52.

V. Books, Dissertations, and Monographs

Asher, Robert E., *Development Assistance in the Seventies*, Washington, D.C., The Brookings Institution, 1971.

Committee on International Migration of Talent, *The International Migration of High-Level Manpower*, New York, Praeger, 1971.

Derbyshire, R. C., *Medical Licensure and Discipline in the United States*, Baltimore, The Johns Hopkins Press, 1969.

Educational Council for Foreign Medical Graduates, *Handbook for Foreign Medical Graduates*, Evanston, Illinois, 1967.

Gish, Oscar, *Doctor Migration and World Health. The Impact of the International Demand for Doctors on Health Services in Developing Countries.* Occasional Papers on Social Administration No. 43. London, Bell, 1971.

Kidd, C. V. and West, K. M., *Migration of Health Personnel*, Washington, D.C., Pan American Health Organization, 1966.

Margulies, H. and Bloch, L. S., *Foreign Medical Graduates in the United States*, Cambridge, Mass., Harvard University Press, 1969.

Mumford, E., *Interns: From Students to Physicians*, Cambridge, Mass., Harvard University Press, 1970.

PAHO Subcommittee on Migration for the PAHO Advisory Committee on Medical Research, *Migration of Health Personnel, Scientists and Engineers from Latin America*, Washington, D.C., Pan American Health Organization, 1967.

Stevens, Rosemary, *American Medicine and the Public Interest*, New Haven, Yale University Press, 1971.

VI. Other Documents

Butter, I. and Maglott, D., "Utilization of Foreign Medical Graduates in the United States," (unpublished manuscript, Ann Arbor, University of Michigan).

Knobel, R.J., Jr., "A Study of the Variable Distribution of Foreign Medical Graduate Residents in U.S. Teaching Hospitals," (Ph.D. dissertation, Ann Arbor, University of Michigan, 1970).

Knobel, R.J., Jr., "Placement of Foreign Trained Physicians in U.S. Medical Residencies," (Unpublished manuscript, Atlanta, Georgia State University).

☆ U.S. GOVERNMENT PRINTING OFFICE : 1973—733-090/2700 3-1