Middle Articles

CONTEMPORARY THEMES

Doctor Migration 1962-4

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This paper gives estimates of the numbers of provisionally or fully registered doctors entering or leaving Great Britain during the two years ended 30 September 1964 and explains methods whereby information about such movement can be regularly obtained in future. The methods used (which aim essentially at determining whether a doctor is or is not in Great Britain on a particular date) ensure, in general, that doctors entering or leaving Great Britain on short holidays, visits, etc., are excluded, but do not call for inquiries about doctors' intentions and so cannot separately identify those whose changes of residence are likely to be permanent. However, the figures suggest that considerable numbers of British-born doctors who leave do in fact return after some experience abroad.

Background

The main source of information about the global movement of doctors to or from Great Britain is an index which contains one record card for each provisionally or fully registered civilian doctor known to be in Great Britain. In general the record card is created when the doctor registers with the General Medical Council. Doctors in H.M. Forces or temporarily registered doctors are excluded. This index, set up originally for defence purposes, is maintained by the Ministry of Health and the British Medical Association and is regularly updated by means of returns received by the Health Departments and the B.M.A. and by ad hoc information about movements of individual doctors. For some years the index was maintained as a continuous manual set of records, but since 1962 it has been recorded on punched cards which are repunched annually so as to reflect the doctor's occupation at 30 September each year; but in some cases, especially for the minority where occupational details have been obtained ad hoc, the occupation may not necessarily reflect the position at 30 September.

So far as possible information is also collected about reasons for entry to and exit from the index each year, and these include immigration and emigration where known. To a large extent the index relies on emigration details being identified as part of the routine arrangements made by the B.M.A. for communicating with overseas doctors, but more recently efforts have also been made to identify possible emigrants by writing to their last known source of employment or address. Immigrants tend to be more easily identified, as the majority take up work in this country. A list of Commonwealth immigrants landing with permits to work as doctors is also returned by the Ministry of Labour. However, by definition the index excludes foreign or Commonwealth doctors with temporary G.M.C. registration only, unless they become provisionally or fully registered soon enough to be included in the immigrant figures for that year.

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Despite a thorough examination of the records at 30 September 1962, when the records were reconstituted, there were many initial difficulties in tracing the very highly mobile population of doctors, especially those moving in and out of the basic post-registration junior training grades in the Hospital Service, and by September 1964 about 8,200 doctors with unknown occupations were recorded in the index. In many of these cases the doctors' locations were also unknown, so that included among them were some who might have emigrated. Accordingly special efforts were made to trace these 8,200 doctors—by inquiry to the last known address in Great Britain of the doctors concerned, and by checking routine statistical returns about individual doctors, mainly for the next year—that is, at September 1965—and later in some cases. The B.M.A. also made a search of their own records for additional details about the missing doctors.

Results

The great majority of these doctors have been positively traced in the sense that definite information has been received regarding their whereabouts or emigration subsequent to September 1964, or else it has been established (a) that the individual record was erroneously included in the index because the doctor was also included under another name (for example, a woman included twice because of change of name on marriage) or (b) that the doctor should have been excluded for one reason or another before 1962. This left only 405 doctors who were in this unknown category at 1964 and who are still unknown. The Ministry has evidence that 182 of this total are in Great Britain, but their present connexion with medical work, if any, has not been established.

There was no information whatsoever about either occupation or location of the remaining 223 doctors. The assumed location of these doctors at 30 September 1964 is given in Table I. All of the 112 males (whatever their countries of birth) who were definitely below the normal retiring age (which for the purpose of this paper has been taken as age 55) are assumed to have emigrated. Deaths can also be discounted in these cases, since nearly all deaths are reliably notified through information supplied initially to the General Medical Council. The allocation of females is more difficult. It has been assumed that all

TABLE I.—Assumed Location at 30 September 1964 of 223 Doctors Whose Country of Residence Was Unknown at that Date and has Remained Unknown

Country of Birth	Assumed to be in Great Britain		Assumed to be Overseas	
	Male	Female	Male	Female
Great Britain	5	67	30	—
Northern Ireland or Irish Republic	—	2	—	—
Elsewhere	4	—	82	33

the 69 untraced female doctors born in the United Kingdom and the Irish Republic were still in Great Britain at 30 September 1964, but that all 33 female doctors born overseas (all of whom were aged under 55) had left Great Britain.

As a result of this work, estimates can be provided of total doctor migration between September 1962 and September 1964 by bringing together information shown by the original updating of the index records and details of those doctors with unknown occupation at September 1964 who were identified subsequently as emigrants.

It follows from the methodology described above that there must be some uncertainty about the precise dates on which known emigrants or immigrants left or came to this country, particularly in the case of the former, where exit notifications tend to lag behind actual departure. This can raise some doubts about whether doctors have been rightly shown as migrating in a specific year. However, every effort has been made to obtain correct information; for example, in many cases doctors with occupation unknown at September 1964 have been shown to have actually migrated in the following year (1964-5) and therefore have not been included in the migration figures shown in this paper, which covers the two years up to 30 September 1964. Nevertheless, in order to minimize the risk of unreliable conclusions arising from doubts about the migration year, the results given in this paper are expressed as totals and averages covering the two index years 1962-4 combined, for which doubts about the year of migration for individual cases would have a correspondingly smaller effect than on figures for a single year.

The figures tend to exclude short-term migration, since doctors who entered and left Great Britain in the year between two counts of the index have not been counted as migrants. However, where this two-way movement spanned the annual updating of the index the doctors will have been counted as immigrants in one year and emigrants in the next, or vice versa. These are believed to be relatively few. The paper also neglects the possibility of migration among doctors with unknown occupation at September 1964 if they have been found subsequently in Great Britain. Some of these doctors could have been abroad for one or two years. Doctors in H.M. Forces are not included, so there is the possibility that a few who may have remained overseas after discharge will not have been counted as emigrants.

Direction of Movement

It will be seen from the foregoing paragraphs that the object of the figures given in this paper is to measure broadly the net movement and its direction (inwards or outwards) during a specific period and not to quantify, as others have tried to do (Abel-Smith and Gales, 1964; Seale, 1966) the annual rate of permanent loss to this country among doctors who emigrate. In any event the concept which has been used in this paper can be more easily adapted to the measurement of the movement of doctors born overseas, especially those who come to Great Britain for limited periods of postgraduate medical training in British hospitals.

Table II shows those doctors definitely recorded as having immigrated or emigrated.

Relatively few doctors within the normal age-retirement groups are included among the immigrants or emigrants. This applies even if age at retirement can be as low as 55 when associated with migration. Of the British-born doctors only 6% of the emigrants and 9% of the immigrants were aged over 55. For doctors born outside the U.K. or Irish Republic 3% of the emigrants and 2% of the immigrants were aged over 55. The sexes are fairly evenly balanced among the emigrants and the immigrants. For British-born doctors the proportion of females among the emigrants was 22% compared with 25% among the returned emigrants, while among those born outside

the U.K. or the Irish Republic female doctors accounted for about 13% of both immigrants to and emigrants from Great Britain.

TABLE II.—*Migrants Entering or Leaving Great Britain During the Two Years Ended 30 September 1964: Analysed by Country of Birth, Age, and Sex*

Country of Birth	Age	All Doctors		Male		Female	
		I.	E.	I.	E.	I.	E.
Great Britain	All ages	843	1,449	635	1,126	208	323
	Under 30	162	388	122	269	40	119
	30-39	364	667	271	541	93	126
	40-49	187	256	145	205	42	51
	50-59	80	81	60	67	20	14
N. Ireland or Irish Republic	60 and over	50	57	37	44	13	13
	All ages	232	199	178	154	54	45
	Under 30	103	26	78	23	25	3
	30-39	78	86	60	66	18	20
	40-49	30	46	25	38	5	8
Elsewhere	50-59	11	13	9	11	2	2
	60 and over	10	28	6	16	4	12
	All ages	2,377	1,919	2,062	1,678	315	241
	Under 30	980	299	843	247	137	52
	30-39	1,158	1,305	1,021	1,152	137	153
	40-49	157	231	130	204	27	27
	50-59	54	53	43	48	11	5
	60 and over	28	31	25	27	3	4

E. = Emigrants. I. = Immigrants.

Note: For most of the doctors shown in Tables II and III the age is that in the year that migration occurred, but in some cases the age shown is that which would be reached one year, or exceptionally two years, after migration.

Table III indicates that 573 more British-born or Irish-born doctors left than entered Great Britain during the two years ended 30 September 1964, to which should be added 30 British-born doctors below normal retiring age who do not appear to be working in Great Britain (see Table I), giving a net loss by emigration of 603 British-born or Irish-born doctors during the two-year period, or approximately 300 a year.

TABLE III.—*Net Balance of Migration (Immigration Minus Emigration) During Two Years Ended 30 September 1964: Analysed by Country of Birth, Age, and Sex*

Country of Birth	Age	Total	Male	Female
Great Britain	All ages	-606	-491	-115
	Under 30	-226	-147	-79
	30-39	-303	-270	-33
	40-49	-69	-60	-9
	50-59	-1	-7	+6
N. Ireland or Irish Republic	60 and over	-7	-7	—
	All ages	+33	+24	+9
	Under 30	+77	+55	+22
	30-39	-8	-6	-2
	40-49	-16	-13	-3
Elsewhere	50-59	-2	-2	—
	60 and over	-18	-10	-8
	All ages	+458	+384	+74
	Under 30	+681	+596	+85
	30-39	-147	-131	-16
	40-49	-74	-74	—
	50-59	+1	-5	+6
	60 and over	-3	-2	-1

Effect of Two-way Migration

Direct comparison between this figure and the conclusions of others working in this field cannot strictly be made, since the object here is the measurement of the net effect of two-way migration over a limited period of time, whereas others (Abel-Smith and Gales, 1964; Seale, 1966) have attempted to measure the annual rate of permanent or long-term emigration from Great Britain. However, the average net loss of 300 a year given in this paper is reasonably consistent with the estimate of Abel-Smith and Gales that between 1955 and 1962 an annual average of 392 British-born doctors left Great Britain and were still abroad at the end of the period, especially as they also suggested that one-quarter of the respondents among their sample of British-born doctors still intend to return eventually to Great Britain.

It is somewhat more difficult to generalize even to a limited extent about comparisons between the figures given in this paper and those given by Seale (1966), because he adopted

different criteria for measuring the gross flow of emigrants according to the nature of the available evidence in the countries to which the emigrants went, and because he was for the most part measuring the flow of emigrants who obtained their medical education in Great Britain or Ireland, which may well cover a somewhat wider group of emigrants than those of British or Irish birth, notwithstanding the possibility that some emigrants born in Great Britain or Ireland might have obtained their medical education elsewhere. There is also the possibility that Seale counted as emigrants from Great Britain or Ireland some who migrated indirectly—that is, from a point outside the British Isles—since for the most part his basic counts of emigrants (graduates of British or Irish medical schools) were based on numbers arriving in a specific country, not excluding, therefore, the possibility of arrival from outside the British Isles. For these reasons alone one would expect that the methods used by Seale would tend to maximize or to over-estimate the rate of migration from Great Britain and Ireland of doctors born in those countries. However, Seale also found it necessary to make important assumptions about both the proportions of arrivals in specific countries who intended to migrate permanently and about emigration to those countries not specifically covered by his own investigations.

Although this paper does not measure the rate of permanent emigration it does show that the relative inward and outward flow of doctors born in the U.K. or the Irish Republic varied considerably from one migration stream to another (see Table IV). For example, there was mainly an outward flow of British-born or Irish-born doctors to Australia and New Zealand, whereas the inward and outward flows of British-born or Irish-born doctors to or from other—that is, unspecified—Commonwealth countries were much more evenly balanced. This fact alone underlines the room for error in the simple grossing-up factor used by Seale to allow for net emigration to areas which his investigations did not cover. (The annual average of Seale's estimates of permanent or long-term emigration from Great Britain during the calendar years 1962–4, inclusive, is about 445.) Another worker in this field, Dr. J. M. Last (1968), has drawn attention to the importance of analysing both outward and inward migration and to the possibility of numerically important short-term migration. The facts found in this paper support these arguments.

Inflow to Great Britain

Table III also shows a net inflow to Great Britain during the two-year period of 458 doctors born outside the United Kingdom or the Irish Republic. From this total should be subtracted 115 untraced doctors born overseas who cannot be shown to have any active occupation in Great Britain and are assumed to have emigrated (see Table I), leaving a total net inflow of 343, or an annual average of about 170 a year. However, this total can present a false picture of the true net gain to medical manpower in Great Britain, since the inflow is made up not only of fully qualified doctors entering as such from overseas but also of graduates from British medical schools who were born overseas and who stay in Great Britain after graduation, and by others who are provisionally or fully registered by the G.M.C. only after spending some time in Great Britain. These doctors may not be counted, therefore, as immigrants by the method used in this paper, but, since all provisionally or fully registered doctors leaving Great Britain will be counted as emigrants, a true picture of the annual increase to British medical manpower is obtained only if overseas doctors entering Great Britain other than as fully qualified immigrants are included with the inflow.

In the years immediately preceding 1962–3 about 150 doctors born overseas were graduating per annum from British medical schools, and it may well be that many of these spent some time after graduation in postgraduate training in junior hospital

medical posts. If this total is added to the net inflow of 170 a year from the two-way flow of fully qualified overseas doctors a total net gain of 320 doctors a year is obtained. Allowing for likely variations and for the possible recruitment of other doctors born overseas who are registered by the G.M.C. after entering great Britain it would be reasonable to estimate the net annual gain to medical manpower in Great Britain between 1962 and 1964 as from 250 to 350. For working purposes a figure of 300 has been assumed in this paper. (This neglects any change in the numbers of doctors born overseas working in this country with temporary registration by the G.M.C.) To a partial extent this estimate can be checked against the annual increase in the numbers of doctors born overseas working in the junior hospital medical grades in England and Wales. (During the period 30 September 1962 to 30 September 1964 the total numbers of doctors born overseas holding a permanent position in these grades increased by 540, an annual average of 270.) The net gain or loss of overseas doctors in other medical occupations outside the National Health Service is not known with any precision, but enough is known to suggest that the changes in the numbers working in the junior hospital grades were numerically by far the most important.

Though the figures given in Tables II and III have been expressed as totals for the two years 1962–4 because of the reasons detailed above, the components for individual years show that the overall migration flow both inwards and outwards increased during the second year. For doctors born in the U.K. or the Irish Republic the details suggested large but approximately counterbalancing increased inward and outward movement in the second year, leaving the net loss at about the same in both years. For overseas doctors there was also the suggestion of increases in both directions, but in this case the relative changes in the net position in each year cannot be established reliably because of the large adjustments, detailed above, needed to arrive at the final position, many of which can be made only for the two years as a whole. Figures for later years will be needed before it is possible to establish whether there will be a continuing trend towards a greater volume of migration inwards, outwards, or both ways.

The figures given in Tables II and III are analysed in Table IV in terms of the countries from which or to which migration

TABLE IV.—*Doctor Migration To and From Great Britain Between 1962 and 1964, Showing Country To or From Which the Doctors Migrated*

Country to or from which Migration Occurred	Emigrants		Immigrants or Returned Emigrants		Net Gain or Loss	
	Born U.K. or Irish Republic	Born Elsewhere	Born U.K. or Irish Republic	Born Elsewhere	Born U.K. or Irish Republic	Born Elsewhere
Total	1,648	1,919	1,075	2,377	-573	+458
N. Ireland or Irish Republic	171*	51	255*	188	+84	+137
India	44	473	48	709	+4	+236
Pakistan	11	82	9	346	-2	+264
Ceylon	—	40	3	84	+3	+44
Canada	283	97	66	44	-217	-53
Australia	233	304	76	365	-157	+61
New Zealand	65	83	21	103	-44	+20
Other Commonwealth	369	428	315	284	-54	-144
U.S.A.	229	114	102	24	-127	-90
South Africa	32	125	23	117	-9	-8
Other foreign	125	98	93	92	-32	-6
Unknown	86	24	64	21	-22	-3

* Represents movements between Great Britain and Northern Ireland or the Irish Republic of doctors born in the United Kingdom or the Irish Republic.

occurred so far as this information is known or can be inferred from available records. (These figures take no account of the adjustments detailed above, which had to be made when arriving at the total migration figures given.)

Additional analyses of the information about the movement of doctors born outside Great Britain show that most doctors born overseas tend to enter or leave Great Britain in journeys directly from or to their countries of birth, though one notable

exception was travel between Great Britain and the North American continent, where the doctors born overseas concerned were mostly those born outside North America.

Posts Held Before Migration

It has not been possible to establish accurately the occupations of doctors immediately before they entered or left Great Britain, partly because occupations are established in many cases only by annual returns at 30 September and partly because a significant minority of doctors are necessarily recorded for a time in the transitional group, without known occupation. However, a partial analysis of those who immigrated or emigrated in 1963–4 and who had a known occupation at the index annual count following or preceding, as the case may be, their arrival or departure suggests that between 40 and 60% of all British-born doctors who emigrated did so after holding junior hospital posts in Great Britain, and that about 20% of all British-born emigrants did so after holding posts as general practitioners. These percentages are roughly consistent with those found by Abel-Smith and Gales (1964) in their questionnaire to British residents abroad in 1962.

For doctors born overseas it can be estimated that between 60 and 75% emigrated after holding posts as junior hospital medical staff. British doctors returning to Great Britain tended to be more evenly distributed over the various medical occupations than did the emigrants, but, even so, between 20 and 30% at least returned to junior hospital posts and the percentage could be higher if the very high percentage falling into unknown occupation contained a disproportionately high number of doctors seeking junior hospital appointments. It seems doubtful whether more than around 10% of the returned British emigrants sought posts in general practice. Of the doctors born outside the U.K. or the Irish Republic only about 10% of the immigrants were positively identified as being in jobs other than the National Health Service Hospital Service.

Future Work

The work detailed in this paper had a twofold aim. The first object was to provide estimates of migration during the period 1962–4, the second to establish methods which could be used to provide a future series of annual estimates. The work is continuing, and the immediate aim is to update the figures to take account of migration patterns in 1964–5 and 1965–6.

Summary

Estimates have been obtained of the numbers of civilian fully and provisionally registered doctors entering or leaving Great Britain during the two-year period September 1962 to September 1964.

The results indicate that of doctors born in the U.K. or the Irish Republic, 1,075 entered or re-entered Great Britain and 1,678 left Great Britain during this period, resulting in a net loss of such doctors of 603, or an approximate average of 300 a year. Most of the migrating doctors were below normal retiring age and both leavers and joiners contained similar percentages of males and females. Precise estimates for each of the two years separately are not given because of doubts in some cases about the exact date of entry or exit, but the evidence suggests that the numbers of both entrants and exits were substantially higher in the second year, though there appeared to be no significant difference in the net loss for each of the two years from this source.

A total of 2,377 doctors born outside the U.K. or the Irish Republic entered Great Britain during this two-year period and 2,034 left, leaving a net gain to Great Britain of 343 overseas

doctors—an average of approximately 170 a year. However, this figure is less than the real increase in the numbers of provisionally or fully registered doctors born overseas working in Great Britain because it does not include doctors born overseas who choose to work in Great Britain after graduating from British medical schools or of those who otherwise obtain registrable qualifications after arrival in Great Britain. After allowing for these factors it seems likely that the true net annual gain to medical manpower in Great Britain in this period from doctors born overseas was between 250 and 350 and for working purposes a figure of 300 has been assumed in this paper. Nearly all the immigrating or emigrating doctors were below normal retiring age, and each group contained about the same percentages of males and females among the immigrants and emigrants, though the proportion of females was smaller among migrating doctors born overseas than among migrating doctors born in the U.K. or the Irish Republic.

Details are given for all doctors, whether born in the U.K. or Irish Republic or born overseas, of the countries to or from which they migrated. There is, in general, a close relationship between the country of birth of doctors born overseas and the country to which they return on leaving Great Britain.

Partial analyses suggested both for doctors born in the U.K. or the Irish Republic and for those born overseas that the occupation on leaving of most emigrants was in the junior hospital medical grades, particularly in the case of doctors born overseas, but this is necessarily a tentative suggestion, since in many cases the occupation immediately before leaving was unknown. Most of the doctors born overseas and many of those born in the U.K. or the Irish Republic entered or returned apparently as junior hospital doctors, but this suggestion also must be qualified by a large area of uncertainty.

The experience gained and methods developed in this exercise should help towards a more speedy assessment of the corresponding migration details for 1964–5 and 1965–6, but some time must necessarily elapse after the migration period before sufficient facts can be reliably established.

Addendum.—The analysis of doctors entering and leaving Great Britain has been extended to September 1965.

In the three years ended September 1965 there was an outflow of 2,700 and in inflow of 1,600 fully or provisionally registered doctors born in the United Kingdom and Irish Republic, giving a total net loss from Great Britain of some 1,100 such doctors. The estimated total net loss was some 600 in the two years ended September 1964. Because of assumptions made about the location of some doctors and doubts about the exact dates of entry or exit, a subtraction of the figures of net loss does not necessarily give an accurate picture of the net loss in the year ended September 1965, although figures from other (N.H.S.) sources suggest that there might well have been an increase in net emigration in the year ended September 1965.

The current estimate of the movement in the three years ended September 1965 of fully or provisionally registered doctors born overseas indicates that the true total net gain to medical manpower in Great Britain of such doctors seems to counter-balance the net loss of doctors born in the United Kingdom and Irish Republic.

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REFERENCES

- Abel-Smith, B., and Gales, K. (1964). *British Doctors at Home and Abroad*. Welwyn.
- Last, J. M. (1968). "International Movement of British Doctors." To be published.
- Seale, J. (1966). *Brit. med. J.*, 2, 576.