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OPPORTUNITIES FOR MEDICAL PRACTICE AT HOME AND ABROAD

BY

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The news that a Government committee has been set up to consider the intake of students into the medical schools has made me decide to publish certain pertinent data which were collected for a lecture entitled "Medical Research and Medical Practice at Home and Abroad." Since I have spent my life as a teacher in Scottish medical schools, it is natural that I should consider the problem under discussion mainly from the Scottish angle. Nevertheless, many of the collected data are of equal importance to the young English graduate.

I have approached this problem in the first instance by considering the composition of the class of medicine in Edinburgh graduating in 1912, the year in which I started my academic career as a medical student. Table I compares the sex distribution and country of origin of

University has occurred, as can be seen from Table I. The overseas students now take their medical degrees in their own institutions, which is as it should be, and the 175 students beginning medicine in Edinburgh every year are selected from the hundreds of applicants mainly domiciled in Great Britain, a small number of places being reserved for students living in those Colonies in which there are no medical schools. Edinburgh has always been a popular choice for English students wishing to study medicine, and in 1954 there were some 333 English applicants for entry to the medical school, of whom 63 were accepted.

I believe it is a sound policy to encourage undergraduate students in the Dominions to undertake their medical studies in their own universities and to fill our quota mainly from the long list of British applicants. In contrast to undergraduate education I believe that the British universities should cater especially for post-graduate education for students from overseas. In this respect Edinburgh has been very successful, since approximately 600 doctors per annum attend the various courses of instruction arranged by the Edinburgh Post-graduate Board. In summary, the points of particular interest in Table I are: (1) The great increase in women medical students: they now comprise approximately 25% of the class. (2) The increase of Scottish students from 40% to 70% of the class. (3) The great reduction in the number of students from Ireland, from Wales, and from overseas.

At this point it is appropriate to consider what happened to the Edinburgh medical students who qualified 40 years ago. Only a small percentage remain to practise in Scotland. What that figure was cannot be ascertained, but I doubt if it was 25% of those who qualified annually as doctors. The great majority of the students from England, the Dominions, and the Colonies who came to Edinburgh for their training returned to their native countries to undertake medical practice. Their example was followed by many Scottish medical graduates, who saw a brighter future in England and overseas than existed for them in Scotland at that time. The Indian Medical Service was a popular choice for many doctors, as were the Sudan Medical Service and the Colonial Medical Service. There appeared to be ample opportunities for every medical graduate of Scottish birth who was prepared to leave Scotland to obtain the type of work which he desired if this was not available to him in his native country.

Opportunities for Practice

Detailed consideration may now be given to the opportunities for practice available at the present time to British graduates in general and Scottish graduates in particular.

TABLE I.—Numbers Graduating M.B., Ch.B. in Edinburgh in 1912 and 1952

Country of Origin	Men		Women		Total	
	1912	1952	1912	1952	1912	1952
Scotland ..	75	103	7	39	82	142
England ..	38	31	2	3	40	34
Ireland ..	15	0	1	0	16	0
Wales ..	4	2	0	0	4	2
India ..	15	0	0	0	15	0
Commonwealth ..	39	15	0	0	39	15
Foreign ..	4	0	2	0	6	0
Total ..	190	151	12	42	202	193

the graduates in medicine in 1912 and in 1952 in Edinburgh. Prior to the first world war, Edinburgh was a medical centre which drew its student population not only from Great Britain but from all parts of the British Commonwealth. At that time some of the medical schools in the Dominions which are now flourishing institutions either did not exist at all or taught medical students only up to the standard of the first or second M.B. (anatomy and physiology). Accordingly large numbers of Colonial and Dominion students came to Britain for their clinical teaching and to obtain a British qualification in medicine. Scottish medical schools were frequently selected by these overseas students for their medical studies. This is perhaps not surprising, since at that time a very large number of Scottish graduates practised medicine in the Dominions and Colonies, and naturally they recommended Scottish educational facilities to potential students. When the new medical schools were created in the Dominions before and after the first world war, many professors of the faculties of medicine were Edinburgh graduates, and so it was only to be expected that Scotland's capital would be a popular choice for overseas students.

During the last 25 years a complete change in the source of origin of medical students in Edinburgh

During the past 20 years the population of Great Britain has increased by approximately 10%, while the number of doctors on the *Medical Register* has increased by no fewer than 25,594—that is, 45%. The number of persons per doctor in England has fallen from 1,250 in 1930 to 900 in 1953 and in Scotland from approximately 800 to 570 during the same period (*British Medical Journal*, 1955). Even if it were conceded that 20 years ago Great Britain was under-doctored as estimated by modern standards, such a disproportionate increase in the number of doctors compared with the increase of the population would inevitably make it much more difficult for recent medical graduates to obtain suitable posts. The position is particularly serious for Scottish graduates, for not only is the ratio of persons per doctor lower in Scotland than in England but the opportunities for entering practice in England are becoming increasingly difficult. The reason for this is clearly indicated in Table II, which shows that the output of doctors by

TABLE II.—*Great Britain: Increase in Numbers of Medical Students Graduating in Selected Years*

Year	England	% Increase	Scotland	% Increase	Ireland	% Increase
1934	847		471		154	
1937	1,096		593		239	
1940	1,323	56	673	43	315	105
1945	1,268		581		428	
1949	1,436		589		452	
1952	1,848	118	673	43	506	228

the four Scottish medical centres in 1952 has remained the same as it was in 1940, while the annual production of doctors in England has increased from 1,323 to 1,848 during that same period. This has resulted mainly from the expansion of the English provincial medical schools. Attention is also drawn to the great increase in production of doctors which has taken place in Ireland in recent years. The majority of these Irish graduates are unable to obtain work in their own country and accordingly seek employment in Great Britain or the Dominions and Colonies.

It is only natural that preference should be given to local graduates by regional appointment boards in England, provided that the applicants' qualifications are satisfactory. Under these circumstances the young Scottish graduate looking for work will turn his eyes to lands overseas, where so many of his predecessors made such a success of their professional careers. India, Pakistan, Burma, and Ceylon are independent nations with their own medical schools, which are being rapidly expanded so that the medical services of these countries can be staffed by their own graduates. The Indian Medical Service is no longer open to our graduates, and the Sudan Medical Service is now at an end so far as European doctors are concerned. A small number of posts in these countries are advertised from time to time by British commercial firms who want British medical officers to be responsible for the care of their employees, but the number of such posts is so small as to make no difference to the overall picture. When I was in Ceylon four years ago I was told that only three European doctors were practising medicine in Colombo, a city of 425,000 inhabitants.

Practice in the Colonies and Dominions

With regard to the opportunities for British doctors wishing to practise in the Colonies, the medical schools in Hong Kong, Singapore, and the West Indies will presumably be able to meet the medical requirements of these regions in the near future. The University of Ibadan, Nigeria, and Makerere College, Uganda, each have flourishing medical faculties, but for a long time to come the Colonial medical services will require medical officers to carry on the excellent work being done in the African Colonies. The opportunity for private practice in Tanganyika, Uganda, and Kenya is small, since the total European population of British East Africa is only about 60,000 persons, many of whom are Civil Servants who receive free medical care. It should also be remembered that there are a large number of Indian doctors practising in these territories. Two-thirds of the European population of British East Africa is concentrated in Nairobi and the adjacent White Highlands. It is my belief that the number of doctors practising in this region already exceeds the regional requirements. This belief is equally applicable to Salisbury and Bulawayo, in Southern Rhodesia.

As the Colonies can absorb only a small proportion of the British doctors wishing to emigrate, what opportunities exist for them in the great Dominions of Australia, New Zealand, South Africa, and Canada? I have visited all these countries during the past five years, and it seemed to me that the competition for practice was extremely severe, at any rate in the big cities. This impression would appear to be fully justified by the data shown in Table III. During the past 20 years there has been a most remarkable increase in the number of practitioners registered in Australia, New Zealand, South Africa, and Canada. With the exception of Canada, this increase is out of all proportion to the increase in the size of the population that has occurred during the same period. Table IV clearly shows that the reason for this great expansion is the increase in production of doctors by the Dominion medical schools. I have not been able to obtain the figures for the total medical man-power registered in Australia, as medical registers are kept only by each State. I am informed that such registers may be somewhat inaccurate, for the same doctor may be registered in more than one State. The number of doctors registered in Victoria has risen from 2,498 in 1934 to 4,207 in 1954, while in South Australia the comparable figures are 484 and 1,202 respectively. There is ample evidence to suggest that the production of doctors in Australia by the Australian medical schools exceeds the national requirements without including the doctors of British and foreign nationality who have emigrated there in considerable numbers since the war and who will wish to continue to do so in the future.

This matter is well reviewed by Sir Hugh Poate (1953) in an article entitled "The Capacity of the Medical Profession in Australia to Absorb New Doctors." Sir Hugh calculates that the number of new graduates required annually for Australia as a whole is approximately 486. The number of Australians graduating in medicine in Australia in 1948 was 297, but by 1951 and 1952 it had reached the

TABLE III.—*British Dominions: Increase in Total Number of Registered Practitioners Compared with Increase in Population (data obtained from the Dominions Offices)*

Country	Year	Approximate Population in Millions		Approximate % Increase		Total No. of Registered Practitioners	% Increase	Approximate No. of Persons per Doctor	
		European	Non-European	European	Non-European			European	Non-European
South Africa ..	1934	2.0	7.5	37.5	33	2,609	147	766	2,875
	1953	2.75	10			6,437		427	1,553
New Zealand ..	1934	1.6		31		1,410	100	1,135	
	1953	2.1				2,800		750	
Canada	1931	10.4		36		10,020	43	1,028	
	1951	14.0				14,325		977	

huge figure of approximately 650 per annum. In addition to local graduates, some 585 doctors from Great Britain and Ireland and from foreign countries have emigrated to Australia between 1948 and 1952. There can be little doubt, therefore, that Australia is rapidly becoming over-doctored.

TABLE IV.—*British Dominions: Increase in Number of Medical Students Graduating in Selected Years Compared with Increase of Population (data obtained from the "Year Book of the Universities of the Commonwealth")*

Country	Year	Approximate Population in Millions		Approximate % Increase		No. of Students Graduating Annually	% Increase
		European	Non-European	European	Non-European		
South Africa	1938	2.05	8.0	29	25	134	224
	1951	2.65	10.0			435	
New Zealand	1936	1.65		24		39	187
	1951	2.05				112	
Canada	1938	11.5		22		492	62
	1951	14.0				791	
Australia	1934	6.6		33		175	263
	1952	8.8				635	

Conclusion

Sufficient has been said to make it clear that opportunities for medical practice in the Dominions and Colonies for British graduates wishing to emigrate overseas are much fewer to-day than they were 40 years ago. Owing to the overcrowding of the profession and the preference given to local graduates, it is my opinion that it would be unwise for a British graduate in medicine to proceed overseas without first having obtained a salaried appointment in a commercial firm, in a university, in a research institute, or in H.M. Overseas Service, or without having obtained a legal contract safeguarding an offer of an assistantship or partnership in private practice. It is also clear that in Great Britain at the present time the chance of becoming a consultant in hospital practice or a principal or partner in general practice is too difficult and too uncertain. In short, there seems to be an over-production of doctors both in Great Britain and in the Dominions.

Unless reasonable opportunities for employment are going to be made available to potential graduates, not only will the numbers entering medical schools fall, according to the laws of supply and demand, but so will the quality of the entrants. The Government Committee appointed to study this important problem will have to consider whether it is better to allow the laws of supply and demand to operate or whether restriction of entry to medical schools should be enforced. That the former mechanism is already operating would appear to be the case, since the number of students starting medicine in Great Britain and Ireland has declined from 2,725 in 1949-50 to 2,280 in 1953-4 (*Lancet*, 1955). On the other hand, it may be felt that the second course is preferable, as it is obviously a wasteful and expensive business to produce more doctors than are required. The question will then arise whether medical schools should be ordered to reduce their annual intake of medical students by a certain quota or whether they should merely be recommended to do so. In this connexion the problem of the excessive production of doctors by the Irish medical schools will require particular attention. Lastly, it will be necessary to decide whether any proposed reduction in intake should be proportionally the same for every medical school in Great Britain or whether medical centres with a long-established international reputation for medical education should receive special consideration.

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DIVERSITIES OF SEX*

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Diversities of sex can be divided into: (1) hermaphroditism, in which the gonads are of both sexes and the external sexual appearances may be male or female or a mixture of both; (2) pseudohermaphroditism, in which the external sexual characteristics are more or less characteristic of the sex opposite to that of the gonads; and (3) homosexuality, a state of affairs in which the libido and sexual urge is directed towards the same anatomical sex and may or may not be associated with recognizable endocrine abnormality.

Hermaphroditism

True hermaphroditism is rare: there is a separate ovary and testis, or an ovo-testis.

Case 1: Woman aged 66.—Her mother died when the patient was 8 years old. She looked after six other children and received no proper schooling. During this period she regarded herself as a woman and wore women's dress, but at the age of 18 realized there was some doubt about her sex and tried to commit suicide on this account. Subsequently she led a vagabond life doing farm work and hawking. She shaved about once a week. For some years she has been becoming progressively bald on the top of the head, after the manner of a man. In May, 1952, she was

FIG. 1

FIG. 2

FIG. 1.—Case 1. True hermaphroditism. Sex regarded as female; has lived as a female, although general appearance rather masculine. One gonad a testis; the other an ovary. Ketosteroids, 3.8 mg. FIG. 2.—Case 1. True hermaphroditism. Scrotum on right containing a hydrocele; short phallus with hypospadias orifice on the perineum; no vagina. Testis in the right inguinal canal.

taken to a welfare institution and transferred to Bensham General Hospital for investigation.

On examination the skin and hair distribution were seen to be those of a man. She had a short stubble of beard, long unclipped hair, but central baldness (Fig. 1). The external genitalia also looked masculine, there being a well-formed scrotum on the right containing a hydrocele, a short penis with a hypospadias orifice on the perineum, and no vagina (Fig. 2). An organ in the right inguinal canal was considered to be an undescended testicle. On closer examination the skin fold on the left side appeared like a labium. The urethra opened on the perineum and there was a slight opening $\frac{1}{4}$ in. (1.9 cm.) long at the end of

*A paper read to Newcastle-upon-Tyne Obstetrical and Gynaecological Society on March 4, 1955.