TALKING POINT

Staffing crisis in pathology

J R ANDERSON, J R TIGHE

Recent statistics on medical staffing show serious shortages in three major pathological specialties—chemical pathology, histopathology, and medical microbiology. Without immediate and effective action the numbers of consultants in these specialties will fall significantly during the next decade. At senior registrar level there are relatively large numbers of vacant posts in pathological specialties, but even if they were all filled the numbers of established posts are too small even to maintain the present levels of consultant staffing in histopathology and microbiology. This has arisen because pathology has not shared in the great increase in junior training posts of the past two decades.

The staffing shortages are well known to the Health Departments and to health authorities, but we do not think the seriousness of the position is widely understood. The continued provision of even the present levels of consultant services in pathology is dependent on the creation of additional training posts and, since this is most likely to be achieved if it is fully supported by the medical profession, it is appropriate to give an account of the nature and size of the problem. The statistics provided annually by the DHSS and those collected by the Royal College of Pathologists' regional advisers in postgraduate education have been used to analyse the staffing position.

Consultant and senior registrar vacancies

Table I summarises the results of attempts during 1979 to fill consultant vacancies in England, Wales, and Northern Ireland. The

TABLE I—Results of advertisements for vacant consultant posts in England, Wales, and Northern Ireland in 1979

	No of posts advertised	No of appointments recommended	% of posts remaining unfilled
Histopathology	55	43	22
Haematology	27	23	15
Medical microbiology	24	16	33
Chemical pathology	10	5	50
Blood transfusion	11	9	18

percentage of posts remaining unfilled is alarmingly high: over 40 of the 127 vacancies were advertised more than once. Analysis by regions showed certain critical areas with a particularly poor record of appointment. Analysis of the average numbers of applicants per consultant post for the five years preceding 1980 (table II) indicates a declining pool of applicants in all the pathological specialties. This has not resulted from expansion, for with the exception of haematology (which has expanded rapidly) increase in numbers of consultants has been slight and well below the average for all specialties.

The total numbers of senior registrar posts and vacancies in England and Wales (October 1979), compiled from returns by college regional advisers, are shown in table III. The DHSS is unable to

obtain the information necessary to record academic vacancies but provides data on vacancies in senior registrar paid posts. Analysis of these data for selected specialties and groups of specialties (table IV) illustrates the relatively large number of vacant posts in the pathological specialties.

TABLE II—Average number of applicants for consultant pathology posts

	1975	1976	1977	1978	1979
Histopathology	4.5	5	4	2.8	2
Chemical pathology	2	4	2	1.3	0.9
Haematology	3	3	3	2.6	2.0
Medical microbiology	3	2	2	1.5	1.0

TABLE III—Senior registrar and lecturer (honorary senior registrar) posts in England and Wales, October 1979

	NHS posts		University posts		Total	
	Established	Unfilled	Established	Unfilled	Established	Unfilled
Chemical pathology	50	16	12	3	62	19 (31%)
Haematology	97	8	29	3	126	11 (9%)
Histopathology	77	11	59	8	136	19 (14%)
Microbiology	62	13	21	2	83	15 (18%)
Total	286	48	121	16	407	64 (16%)
Total excluding haematology	189	40	92	13	281	53 (19%)

TABLE IV—Proportion of (paid) senior registrar posts vacant in England and Wales, September 1979

	Total No of posts	No of posts vacant*	% of posts vacant
Medical specialties	647	42	6.5
Surgical specialties	432	29	6.7
Obstetrics and gynaecology	87	3	3
Anaesthetics	342	16	4.7
Radiodiagnosis	208	28	13.5
Mental illness	219	14	6.4
Pathology specialties	282	45	16
All specialties excluding pathology	2155	201	7.2

*Vacant posts include those occupied by locums.

Analysis of DHSS statistics for September 1979 shows relatively high percentages of impending consultant vacancies—that is, consultants over 55—in histopathology and microbiology (table V). The ratio of expected consultant vacancies to senior registrars is high for histopathology and higher than average for microbiology. The numbers of expected consultant vacancies and of senior registrars

TABLE V—Percentage of consultants over 55 in September 1979 and ratio of consultants over 55 per senior registrar

	% of consultants over 55	No of consultants over 55 per senior registrar
Pathological specialties		34
Histopathology		38
Medical microbiology		35
All other hospital specialties		24

Royal College of Pathologists, 2 Carlton House Terrace, London SW1Y 5AF

J R ANDERSON, MD, FRCPATH, president

J R TIGHE, MD, FRCPATH, registrar

are regularly reviewed by the Central Manpower Committee. If the ratio of 1.2 vacancies per senior registrar for all non-pathological specialties represents a balanced position the higher ratio in microbiology, and particularly the very high ratio in histopathology, show that it will not be possible to maintain the present level of consultant staffing in these specialties over the next few years. To bring the ratio to 1.2 would require an additional 87 and 20 senior registrars in histopathology and microbiology respectively. In view of the high senior registrar vacancy rate in the pathological specialties, however (tables III and IV), the immediate staffing problem cannot be solved by an increase in the total numbers of senior registrar posts.

Staffing at SHO and registrar levels

The ratios of SHOs and registrars per consultant (DHSS figures for September 1979) for selected specialties and groups of specialties are shown in table VI, which includes salaried NHS and honorary posts. It is apparent that the shortage pathological specialties—chemical pathology, histopathology, and medical microbiology—have low ratios—that is, relatively few junior training posts. The

TABLE VI—Ratios of SHOs and registrars per consultant in various specialties and groups of specialties

	Registrars per consultant	SHOs per consultant	Registrars + SHOs per consultant
Medical specialties	0.45	0.92	1.37
Surgical specialties	0.57	1.1	1.67
Obstetrics and gynaecology* ..	0.64	1.67	2.31
Anaesthetics	0.52	0.53	1.05
Radiodiagnosis	0.27	0	0.27
Mental illness	0.67	0.63	1.3
Pathological specialties ..	0.20	0.16	0.37
Chemical pathology ..	0.32	0.08	0.40
Haematology	0.35	0.22	0.57
Histopathology	0.17	0.05	0.22
Medical microbiology ..	0.14	0.05	0.19
All specialties excluding pathology	0.49	0.82	1.31

*It should be noted that there are no house officer posts in obstetrics and gynaecology; this accounts for the very high ratios of SHO and registrar posts.

ratio is also fairly low for haematology, which is recruiting well, but this specialty attracts recruits from junior training posts in general medicine. Junior training posts are presumably created for either or both of two reasons—to fulfil service requirements and to train sufficient doctors to fill the prospective numbers of vacancies in career-grade posts. Since there are far more SHOs (approximately 9300) than registrars (approximately 5800) and the differences in numbers of trainees per consultant (table VI) are more pronounced for SHOs than for registrars, it is likely that SHO posts, which are not subject to central control, are set up mainly on the basis of service requirements. An estimation of the number of registrar posts required to maintain the supply of senior registrars is complicated by several factors, including the occupancy of some posts by trainee general practitioners or by overseas doctors who may intend to return home. Accordingly, a better indication of the validity or otherwise of the staffing structure in various specialties is provided by table VII, which is based on DHSS figures relating to the filling of paid (non-honorary) senior registrar vacancies from October 1978 to September 1979. The figures relate to approximately 60% of vacancies for which statistics were available, and are thus incomplete, but this applies throughout and is unlikely to have affected unequally the statistics for major specialties or groups of specialties. The average numbers of applicants per post were obtained by dividing the total number of applications by the total number of vacancies. Some doctors applied for more than one post. Since this obviously affects the number of applicants per post an indication of the success rate of applicants is given in the second column, which shows the percentage of all applicants who did not gain a senior registrar appointment during the year. The equivalent figures for consultant vacancies are also shown.

The degree of competition that is desirable or acceptable for senior registrar posts is a matter of opinion, but there can be no doubt that unless there is a dramatic change in the staffing structure the career prospects in some specialties are poor. The figures for consultant posts roughly parallel those for senior registrar posts, but the differences between specialties are less marked. The figures for

obstetrics and gynaecology illustrate the misleading effect of candidates applying for several posts, for, though there were nine applications per post, the percentage of unsuccessful candidates during the year was no higher than in the surgical specialties with 3.7 applicants per post.

Table VII confirms the suspicion that the distribution of junior training posts between specialties (table VI) does not reflect closely the numbers of trainees required to fill prospective consultant vacancies. In some specialties the numbers of SHO and registrar

TABLE VII—Mean numbers of applicants for senior registrar and consultant posts and the percentages of applicants failing to obtain a senior registrar or consultant post during the year October 1978 to September 1979

	Senior registrar vacancies		Consultant vacancies	
	Applicants per post	% of applicants failing to obtain a post	Applicants per post	% of applicants failing to obtain a post
Medical specialties	6.0	64	4.3	66
Surgical specialties	16.9	85	3.7	74
Obstetrics and gynaecology	19.9	90	9.0	73
Anaesthetics	14.8	63	3.1	52
Radiodiagnosis	5.3	52	2.1	42
Mental illness	9.0	58	3.2	56
Pathology specialties	3.2	53	1.6	46
Chemical pathology	1.1	22	1.0	50
Haematology	6.4	64	2.0	50
Histopathology	3.0	36	2.0	50
Medical microbiology	1.8	30	1.0	20

posts are disproportionately large, while in the shortage pathological specialties the figures add weight to the evidence presented earlier that there are too few posts even to sustain the present inadequate establishment of senior registrar posts.

Demand for junior training posts

In the absence of information on the numbers of vacant SHO and registrar posts it is difficult to determine whether recruitment into pathology is restricted by the numbers of doctors seeking training posts or by the limited numbers of posts available. To obtain this information pathologists in each of the medical schools were recently (June 1980) asked whether they could accept more junior training posts and fill them with UK-based trainees. All 25 schools in England and Wales replied. Fifteen said that they are prepared to accept a total of approximately 84 additional SHO/registrar posts and believe they would have little difficulty in attracting UK graduates into them. Most of them are already turning away suitable applicants. For example, 80 applicants responded to three recent advertisements for nine SHO posts in three centres in different regions in England and over half the applicants were UK graduates. Some schools have applied for additional posts but have been turned down for lack of funds; some new posts have been approved but remain unfunded, while some centres have given up hope and have stopped asking for new posts. The remaining 10 schools are either not able to accept more trainees or did not answer the question clearly.

Inevitably, some of the posts would attract trainees who would eventually opt for a career in haematology (see below). Any additional posts should, however, be created primarily for the purpose of increasing the number of trainees in the three shortage specialties in pathology. This restricted survey does not measure the size of the pool of would-be trainee pathologists. There seems, however, to be little overlap in the applicants for posts in different centres and so the pool is apparently large. But we do not know what happens to unsuccessful applicants. Because of urgency we have so far approached only the teaching centres, but many training posts are held by non-teaching hospitals and determination of the total number of potential recruits would require a bigger survey. While not conclusive, the restricted survey is encouraging and suggests strongly that more junior training posts would help to solve the recruitment problem.

Many trainees in medicine, surgery, and obstetrics and gynaecology seek some training in pathology, and in the past some of these have switched to a career in pathology. Few centres can provide such training because of lack of posts. Nor can clinical trainees usually be released from service duties for secondment to a pathology department during tenure of their clinical training post.

OVERSEAS DOCTORS

Though there are relatively few SHO and registrar posts in pathology, it could be argued that if they were all occupied by UK-based trainees intending to stay in this country there would be sufficient posts to maintain the present consultant pool. Against this argument, the proportions of SHOs (39%) and registrars (52%) in pathology who were born overseas are smaller than the averages for all the other specialties grouped together (52% and 55% respectively). It might be possible to ensure that more of the junior training posts in pathology were held by whichever laboratories could attract trainees intending to practise in this country. But this would be a difficult and slow process and would, moreover, upset the balance of postgraduate training provided by Britain for developing countries.

It seems unlikely that there will be a rapid fall in the numbers of overseas doctors seeking training posts, for the numbers taking the PLAB test have increased annually since 1975 (from 787 to 2420) and so have the numbers of first-time candidates (from 680 to 1570) and the numbers who pass the test (from 278 to 919). The number of doctors granted temporary or limited registration for the first time fell during the period 1974 to 1976 because of the introduction of the test but has risen annually since 1976. Because of these trends we believe it is unrealistic to expect that the number of junior training posts in pathology available to UK graduates will increase in the near future because of a decline in the number of overseas doctors seeking training. Any rapid fall in overseas trainees in all specialties would, however, be likely to aggravate the shortages of trainees in pathology unless accompanied by a corresponding reduction in the numbers of junior training posts in the oversubscribed specialties. A distinction should be made between the numbers of posts required to train doctors for consultant careers in the UK and the numbers of posts which can be supported for overseas doctors seeking training in this country but intending to return home.

Additional SHO and registrar posts

From the evidence available we are convinced that there is an urgent need for many more SHO and registrar posts. In estimating the number required it is essential to allow for trainees who will change their mind. Furthermore, junior trainees in pathology are encouraged to rotate through all the major pathological specialties and, whatever their original intention, some will opt for a career in haematology, a specialty which continues to expand rapidly, is recruiting well, and is not generally regarded as a shortage specialty. Consultants in charge of the work of haematology laboratories, however, must be competent and interested in such work and, while many trainees in haematology seek junior training posts in general medicine, some early training and experience in laboratory work seems desirable to ensure the continuation of the consultant laboratory service which is such an important part of haematology.

In October 1979 there were 64 senior registrar posts vacant in the pathological specialties in England and Wales (table III). Assuming a three-year tenure of senior registrar posts in pathology, additional registrar posts are required to fill 21 senior registrar vacancies annually. Assuming a two-year tenure of registrar posts and a loss (to other specialties or general practice) of 33%, 64 additional registrar posts are required to achieve this. To maintain this registrar pool it would be necessary to fill 32 registrar vacancies annually. Assuming a one-year tenure of SHO posts, and a loss of 50%, the number of additional SHO posts required is also 64. These estimates are approximations but are almost certainly too low, for they are based on minimal training periods in each grade and make no allowance for two important factors. Firstly, a relatively high proportion of training posts in pathology attract women doctors, many of

whom because of domestic commitments may seek part-time consultant posts. Secondly, the steady increase in the general work load in pathology and the ever-increasing clinical specialisation necessitate increased staffing levels of pathology departments at consultant level.

Nevertheless, the creation and filling of these numbers of posts would relieve the immediate crisis and prevent the impending serious deterioration in the pathology services. The additional SHO posts are required without delay and the registrar posts within the next year. There seems no hope of the universities providing any of these additional posts in the present economic climate, particularly as these are required mainly to train NHS consultants. The universities are unable to support their present establishment, and everywhere posts are being frozen. While this first objective is being tackled the future staffing requirements in pathology should be reviewed and further appropriate steps taken. The Manpower Advisory Panel in pathology is currently undertaking this review.

Discussion

During the past two decades there has been a considerable increase in the total numbers of SHO and registrar posts, in the annual number of UK medical graduates, and in the numbers of doctors from developing countries coming here for training. This last factor has allowed an increase in the numbers of junior training posts disproportionate to the increase in consultant posts. For much of this period the increase in numbers of junior training posts in pathology has been small, and when allowance is made for the numbers of such posts occupied by overseas doctors, many of whom return home, the number of trainees is insufficient to sustain the present establishment of consultant posts.

There is now good evidence that recruitment in pathology has improved and that the demand for training by UK graduates exceeds the number of junior training posts available. Unfortunately, this has come at a time of financial stringency and recent requests for new training posts in pathology have largely been rejected because of lack of funds and the pressure on health authorities to give priority to posts requested for the ever-increasing acute clinical services. The Royal College of Pathologists, with the agreement of the DHSS and the Joint Consultants Committee, has urged through its regional advisers that high priority be given to the creation of additional SHO/registrar posts without delay in each region.

In the face of increasing competition for funds, however, creation of such posts is likely to require the wholehearted support of the medical profession at regional, district, and hospital levels. Ultimately, the provision of a particular hospital service depends, or should depend, on its contribution to patient care. The main duty of most pathologists in the NHS is the investigation of patients, and the value of such consultant services is best assessed by our purely clinical colleagues responsible directly for the care of patients. Accordingly, we ask them to consider urgently and most seriously the effect of shrinkage of the consultant pathology services. If they share our view that this would have an important adverse effect on patient care then we urge them to do all in their power to support the creation of more junior training posts.

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