*Special report***Paediatric manpower: towards the 21st century**

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SUMMARY The British Paediatric Association (BPA) has carried out a national survey of paediatric medical manpower in the hospital and community child health services. The results of the survey relating to England and Wales are presented and compared with Department of Health and Social Security (DHSS) manpower statistics. On the basis of the survey findings and current trends in the pattern of paediatric care paediatric manpower requirements over the next 10 years are estimated.

The consultative document, *Hospital Medical Staffing: Achieving a Balance* sets out three basic objectives¹: (1) to increase the number of consultants; (2) to match more closely the number of doctors in training to expected consultant opportunities; and (3) to ensure the necessary support for consultants to provide 24 hour cover in the acute specialties. Detailed plans for the implementation of these proposals were drawn up by a steering group on behalf of the United Kingdom Health Departments, the Joint Consultants Committee, and the Chairmen of Regional Health Authorities and published in their report, *Plan for Action*.² In preparation for these impending changes in staffing structure the BPA has undertaken an extensive survey of present manpower in paediatrics and has reviewed manpower needs in the specialty over the next 10 years.

Three important trends in paediatrics must be taken into account when future manpower needs are being considered: (1) the integration of the hospital and community child health services within districts; (2) the growth of the paediatric specialties; and (3) the continuing developments in general and neonatal paediatrics in district general hospitals.

(1) Integration of district child health services

The Committee on Child Health Services—the ‘Court Committee’—recommended that the district child health services should be integrated, with a two tier system based on comprehensive primary care firmly linked with supporting consultant and

hospital care.³ After protracted discussions there is now broad agreement between the government and the profession that this recommendation should be implemented.

The Child Health Forum was set up in 1985 by the British Medical Association (BMA) and consisted of representatives from community medicine, community health, general practice, hospital consultants, and hospital junior staff. Its report⁴ has been accepted by all the ‘craft’ committees, the Council and the Annual Representatives’ Meeting of the BMA, and by the Joint Consultants Committee. The Forum envisages in every health district a consultant led service providing secondary child health care with the necessary supporting services provided partly by doctors in training and partly by doctors in a service career grade with delegated responsibility from the consultants. Initially the secondary child health service will require a minimum of one consultant paediatrician in community child health (CPCCH) for each district, accepting that there will be a subsequent expansion in numbers in accordance with local needs. CPCCHs will have to be supported by the necessary specialist training posts, incumbents of which may rotate between hospital and community child health. As the necessary transition from senior clinical medical officer to CPCCH proceeds it is important that the specialist responsibilities in community child health at present undertaken by senior clinical medical officers be fully covered in each health district and current provision suggests the need for about 2.5 CPCCHs per district.

(2) The growth of the paediatric specialties

When the Court Committee published its report in 1976 there were 70 consultants working as paediatric specialists in the United Kingdom and the committee recommended an increase to 137.³ In the 10 years since then growth in the paediatric specialties has been far more rapid than was foreseen. A survey carried out by the specialty groups of the BPA in 1986 identified 247 consultant paediatricians practising part time or whole time in a specialty within paediatrics in the United Kingdom (table 1) and this total is an underestimate as there was only an 80% response to the inquiry.

Official statistics for the number of consultant paediatricians in specialties other than paediatric neurology are not available. There is some uncertainty about how most of these specialist paediatricians are classified but paediatric cardiologists are known to be recorded as adult cardiologists in the DHSS manpower tables.

The present need for further growth in the paediatric specialties in England and Wales is estimated by the BPA specialist groups to amount to some 390 posts. Most of these posts will of necessity be based in university hospitals and the numbers required take account of the need both for research and for tertiary patient care.

(3) Developments in general and neonatal paediatrics in district general hospitals

Information on the workload of consultants in the National Health Service (NHS) was recorded in the Office of Health Economics survey published in the 1978 Doctors' and Dentists' Review Body Report.⁵ Consultant general paediatricians had the highest recall rate to hospital and a significant number of them were on call on a one in two rota throughout their professional careers. Since then the intensity of paediatric care in both general and neonatal wards

has increased and it is now only possible to provide a satisfactory level of 24 hour consultant cover if consultant general paediatricians work a minimum on call rota of one in three. This entails at least three consultant general paediatricians per district with four or perhaps more in larger districts.

Bearing these trends in mind the BPA foresees consultant paediatric manpower for England and Wales rising to a total of 1490 over the next 10 years or so. This total can be broken down as follows: to provide 2.5 CPCCH per district, 500; to provide the estimated number of paediatric specialists, 390; and to provide at least three general paediatricians per district, 600.

The BPA survey

In the summer of 1986 questionnaires were sent to a named consultant paediatrician in every health district, health board, and postgraduate hospital with paediatric staff in the United Kingdom. In order to ensure that the manpower data were as accurate and up to date as possible it was considered essential to obtain the necessary information directly from a professional source within the district rather than from administrative records. Information was requested on the numbers and sessional commitments of all medical paediatric staff, including honorary staff, in both hospital and community child health services. The dates of retirement of senior staff were also requested and for all but senior house officers and clinical medical officers names were requested to avoid duplication. Where the consultant paediatrician was unable to provide details of community child health staff he or she was asked to enlist the aid of a senior member of that staff. Respondents were invited to indicate their estimate of the need for additional consultant staff in the district over the next 10 years.

The work entailed in completing these questionnaires was considerable and posed problems for the respondents, particularly those in postgraduate hospitals or in districts with university hospitals. Delays in returning questionnaires were therefore inevitable but by the autumn of 1987 complete data had been received from every hospital and community child health service in the United Kingdom. The data have been recorded on computer discs in table form giving numbers of staff and whole time equivalents in hospital and community by district and region. This is now the definitive record of paediatric manpower in the country in 1986 and the BPA intends to update the figures regularly. A start has already been made on collecting revised data for 1988.

In view of the separate arrangements for man-

Table 1 *Numbers of consultants in the paediatric specialties in the United Kingdom (BPA 1986)*

<i>Specialty</i>	<i>No</i>
Endocrinology	21
Gastroenterology	26
Metabolic disease	17
Nephrology	24
Neurology	30
Oncology/haematology	38
Perinatology	66
Respiratory disease	25
Total	247

power in Scotland and Northern Ireland the data and discussions in the remainder of this paper refer to paediatric manpower in England and Wales only. Table 2 summarises the main findings of the BPA survey and shows the equivalent DHSS figures (paediatrics and paediatric neurology) for comparison.

Consultants

The BPA survey records 744 consultant paediatricians (642 whole time equivalents) of whom 115 hold honorary appointments with the NHS. The comparable DHSS figure for 1986 is only 645 (583 whole time equivalents).⁶ The BPA data, however, are supported by the names of individual consultants and must be considered more accurate. The disparity is perhaps explained in part by the extent to which consultant paediatricians in the specialties apart from paediatric neurology are recorded within the adult specialty and in part by the number of CPCCHs who may be recorded in community medicine tables. These differences underline the need for meticulous collection of manpower figures from local sources.

In the BPA survey consultants with five or more sessions in community child health numbered 47 and they held appointments in 35 health districts. Some 20 new CPCCH appointments were made in 1987 so it is likely that about 145 of the 200 districts in England and Wales have not yet made a CPCCH appointment. The survey identified 792 senior clinical medical officers (572 whole time equivalents) working in child health, a little over 2.5 whole time

equivalents per district, which is the BPA recommended district establishment for CPCCH. As there were 640 senior clinical medical officers above the age of 50 in 1986⁷ there will clearly be ample opportunities for reaching the desired level of 2.5 CPCCH per district over the next 10 years by replacing retiring senior clinical medical officers without the need for new money, at least for the first few years of each appointment.

Senior registrars

Table 3 shows the number of senior registrar posts and their type, as identified in the BPA survey. The difference between the BPA figure of 200 and the 159 recorded by the DHSS⁶ has been almost completely resolved by further inquiries to regions by the DHSS, which have raised the official total to 194 and have shown a further three paediatric senior registrar posts recorded as posts in adult cardiology.

Assuming an average duration of four years for senior registrar posts and an average of 30 years for the professional life of a consultant the required ratio of senior registrars to consultants is 1:7. When the specialty is ultimately in a steady state with 1490 consultants, the number of senior registrar posts needed will therefore be roughly 210. During the period of growth in the number of CPCCH posts over the next 10 years, however, there will be a need for a temporary increase in the number of senior registrars in the field of community child health. The overall total of senior registrar posts required can be calculated from the expected number of consultant vacancies. We estimate the number of consultant retirements and losses to be 22 per year, the number of retiring senior clinical medical officers who will be replaced by CPCCH to be an additional 30 per year, and growth in the other fields of paediatrics to continue as in the last few years—that is, at a rate of 20 per year. This gives a total of 72 consultant posts a year which must be supplied by 288 (72×4) senior registrar training posts. Any retirements of senior clinical medical officers in excess of 30 will provide

Table 2 *Paediatric manpower in England and Wales in 1986*

Grade	BPA survey		DHSS	
	No	Whole time equivalents*	No	Whole time equivalents*
Consultant	744	642	645	583
Senior registrar	200	—	159	—
Registrar	356	—	287	—
Senior house officer	1080	—	1031	—
Associate specialist	40	24	28	21
Hospital practitioner	36	7	24	5.6
Clinical assistant	184	38	187	40
Senior clinical medical officer in child health	792	572	Not recorded	

*Whole time equivalents for hospital staff were calculated, as in the DHSS hospital medical staff tables, by dividing the number of weekly sessions by 11. The same calculation was used for community medical staff rather than the method of dividing the weekly number of hours by 37, used in the DHSS community medicine and community health service medical staff tables.

Table 3 *Numbers of senior registrars. BPA survey in England and Wales in 1986*

Type of post	No
NHS full time	87
NHS part time	21
Honorary (university)	52
Honorary (soft money)	31
Research	9
Total	200*

*DHSS recorded 159 in 1986.

the additional temporary senior registrar posts required for training in community child health.

Registrars

The total number of registrars identified by the BPA survey was 356 (table 4). The discrepancy between this figure and the DHSS total of 287⁶ is probably accounted for by the 66 research registrars.

In estimating the future needs for registrars two proposals made in *Plan for Action* must be taken into account²: (1) the designation of overseas registrars, who will return to their own countries, as 'visiting registrars'; and (2) the establishment of a quota of 'career registrars', who will be eligible for a hospital career in the United Kingdom, in order to maintain an appropriate balance with senior registrar and consultant posts.

Of the 287 registrars recorded by the DHSS in 1986, 115 were born overseas⁶ and the BPA considers that there will be continuing training opportunities for at least 100 visiting registrars. The number of career registrars needed in the period of expansion in the next 10 years, allowing for losses into general practice or other specialties, will be about 250 which, together with 100 visiting registrars, gives a total of 350. As in the case of senior registrars the number of career registrars will fall when the specialty has reached its steady state. These posts could, however, be retained as visiting registrar posts and continue as part of a recognised training programme as there is no manpower restriction on visiting registrar posts.

Senior house officers

The BPA survey showed that of a total of 1080 senior house officers in paediatrics 38% are general practitioner vocational trainees. The number of general practice trainees is likely to rise in view of the importance now attached to paediatric training for general practitioners, and doctors who are

planning a career in a specialty other than paediatrics will continue to opt for some paediatric experience and training at senior house officer level. The BPA accordingly foresees a modest rise in the number of senior house officers in paediatrics to about 1200.

The 'Safety net'

Paediatrics is recognised in *Plan for Action* as one of the acute specialties to be included in the safety net arrangements,² which aim to ensure a minimum safe level of resident intermediate staff for 24 hour emergency cover. The provision of an acute service for neonates and seriously ill children in district hospitals requires resident staff with paediatric experience. Our manpower proposals would meet this requirement with a one in three rota, using varying combinations of senior registrars, career registrars, visiting registrars, second year senior house officers, and the new staff grade. First year senior house officers are too inexperienced in paediatrics to be included in the safety net staff. As the number of whole time equivalents in the non-training grades in paediatrics are relatively small at present (table 2) it may be necessary to increase the number of posts in the new staff grade to fulfil the safety net requirements in some districts.

Conclusion

At a time when major changes are taking place in the hospital staffing structure and the district child health services are progressing towards integration it was thought essential that the BPA, which is the only organisation with the necessary understanding of paediatric services, should obtain first hand information from local professional sources on all paediatric staff in the country. This exercise in the collection of medical manpower statistics, though time consuming, has proved to be worth while. Based on these reliable data it has been possible to make projections for paediatric manpower for the next 10 years and into the 21st century (table 5).

Table 4 Numbers of registrars. BPA survey in England and Wales in 1986

Type of post	No
NHS full time	229
NHS part time	11
Honorary (university)	22
Honorary (soft money)	28
Research	66
Total	356*

*DHSS recorded 287 in 1986.

Table 5 Proposed future paediatric manpower profile

Grade	No
Consultants	1490
Senior registrars	210
Registrars:	
Total	350
Career	250
Visiting	100
Senior house officers	1200

References

- ¹ Department of Health and Social Security. *Hospital medical staffing: achieving a balance*. London: DHSS, 1986.
- ² United Kingdom Health Departments, Joint Consultants Committee and Chairmen of Regional Health Authorities. *Hospital medical staffing: achieving a balance. Plan for action*. London: DHSS, 1987.
- ³ Report of the Committee on Child Health Services. *Fit for the future*. London: HMSO, 1976.
- ⁴ Report of the child Health Forum. BMA Annual Report of Council 1986–7. *Br Med J* 1987; **294**: appendix II:34–6.

⁵ *Review body on doctors' and dentists' remuneration*. 8th report. London: HMSO, 1978.

⁶ Statistics and Research Division, DHSS. *Hospital medical staff—England and Wales. National tables, 30 September 1986*. London: DHSS, 1987.

⁷ Statistics and Research Division, DHSS. *Community medicine and community health service medical staff—England and Wales. National tables, 30 September 1986*. London: DHSS, 1987.

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