A further study of trainee general practitioners

I. M. RICHARDSON, M.D., Ph.D., F.R.C.P.Ed., F.R.C.G.P., D.P.H.

J. G. R. HOWIE, M.D., M.R.C.G.P.

J. S. BERKELEY, M.R.C.G.P., D.Obst.R.C.O.G., Dip.Soc. Med.

Department of General Practice, University of Aberdeen

In a previous paper (Richardson and Howie, 1972) we argued that more precise information was required on the work done by trainee general practitioners and we gave some results from a simple study of a sample of two weeks' consultations by 13 trainee assistants. Partly to check the findings from that pilot exercise, but also to explore a number of additional aims, we have conducted a second study.

Aims and methods

A main objective was to see if evidence of progressive learning could be obtained. The 17 trainees appointed at September 1972 in the North-east Scotland region agreed to record the following information about all their consultations in four separate weeks of the training year—in November 1972 and in January, March, and May of 1973:

> Patient's age, sex, occupation; date and location (home, surgery, or other place) of consultation; new or return consultation; main (and other) diagnosis; drugs prescribed; use of specialist, laboratory, or radiological resources; whether the consultation was, or was intended to be, discussed with the trainer.

Entries on the record forms were made during the consulting sessions and passed to the Department of General Practice for coding and computerised analysis.

Results

Workload

The average number of patients seen per trainee per week was 93, the range extending from 53 to 122. The figures for each of the four weeks are shown in table 1.

TABLE 1

AVERAGE NUMBER OF PATIENTS SEEN PER TRAINEE BY SEASON

Average number of patients seen	*November week*	*January week*	*March week*	*May week*
	87	103	91	93
Range	47–117	61–140	47–128	54–146

Converted into patients seen per weekday, these figures give an average of 19 and a range of from 10 to 25—both figures are similar to those recorded in the earlier study and the average of 19 patients seen per day is about half the workload recorded for general-practitioner principals in our 1969-70 survey (Richardson *et al.*, 1973).

The explanation for the quite wide variation between trainees in the number of patients seen is no doubt partly due to differences between trainers in their view of how much work a trainee can competently handle, but it also reflects the trainer's workload as measured by list size. The average number of patients seen per week among trainees whose principal had less than 2,000 patients was 89, compared with 103 for trainees where the list size per doctor was 2,000 or more. Since it is known from another study (Buchan and Richardson, 1973) that trainees vary quite considerably in their rate of working, it is difficult to lay down upper and lower limits for the number of patients to be seen per day or week by an average trainee general practitioner. That

such limits may be desirable is suggested by anecdotal evidence from the minority of trainees who felt either that they had too little or too much work, and more objectively by the inability of the hard-pressed to keep up with a normal appointments system.

Type of consultation

Twenty-two per cent of the average trainee's patients were age 0–14 years, the range extending from 11–31 per cent, and 20 per cent of patients were age 65 and over, the range being from 13–34 per cent. Just over one third (39 per cent) of the trainee consultations were in patients' homes (range 18–69 per cent) this figure being almost identical with the proportion of home visits recorded in our study of principals. The proportion of first or new consultations was, at 49 per cent for the trainees, very similar to that expected from the workload study.

Trainees were asked to record the occupation of either the patient or (in the case of children and married women) the occupation of parent and spouse, so that we could see whether there was any bias in the social class of the patients who consulted them. Twelve trainees managed to record occupation for 90 per cent or more of their patients and the pooled data showed a social class distribution close enough to the expected population distribution (based on 1961 census data) to justify the conclusion that there was no obvious social class bias in trainee experience.

Morbidity

The difficulties inherent in accurate classification of illness seen by general practitioners are well known; nevertheless it seems important to try to compare the diagnoses recorded by these young doctors in training with the patterns noted in our 1970 study of 150 principals. Table 2 shows the results for the main categories of illness.

TABLE 2

COMPARISON OF DIAGNOSES MADE BY TRAINEES AND PRINCIPALS

Diagnostic category	*Per cent of all diagnoses made*		*Per cent range for all trainees*
	Trainees	*Principals*	
Respiratory	*27*	*22*	*17–36*
Cardiovascular	*9*	*10*	*7–16*
Locomotor	*9*	*7*	*7–17*
Skin disease	*9*	*6*	*5–15*
Alimentary	*7*	*5*	*5–11*
Psychiatric	*7*	*6*	*3–11*
Genitourinary	*6*	*5*	*3–10*

Allowing for observer error in classification, the data given suggest that on the whole the clinical experience of this group of assistant general practitioners in training is representative. This was confirmed by examination of individual trainee profiles, in none of which were any significant deviations in classification found.

Drug prescribing

From our earlier analyses of the work of trainees and principals (Berkeley, 1973; Berkeley and Richardson, 1973) it was known that the prescribing habits of trainees in skin disease were similar to those of principals in general practice. This exercise enabled us to extend the study of drug use patterns in training for general practice.

The higher prescribing rate of antibiotics by trainees will partly reflect their slightly higher proportion of first consultations for respiratory illness; that apart, the total prescribing patterns of learners and teachers are similar. However, both in the study of principals and in this one, marked variation between doctors was noticed; for example, the average trainee prescribes an antibiotic at 65 per cent of first consultations for respiratory illness, but the range was from 50 to 85 per cent—yet another reminder of the problem of antibiotic prescribing (Howie *et al.*, 1971).

TABLE 3

DISTRIBUTION OF DRUG GROUPS IN TRAINEES AND PRINCIPALS IN PERCENTAGES

Drug group	*Trainees*	*Principals (Workload study)*
Anti-infective (mainly antibiotics)	*35*	*24*
Nervous system	*28*	*32*
Cardiovascular and haemopoietic	*11*	*14*
Hormones	*8*	*8*
Other	*18*	*22*
TOTAL:	*100*	*100*
Number of prescriptions	3754	5730

Although the number of consultations recorded in the four sample weeks showed little or no change, a slight upward trend was observed in the proportion of all first consultations at which no prescription was given.

Sample week	*Per cent of first consultations at which no prescription given*
November	*26*
January	*29*
March	*29*
May	*34*

This may indicate a learning effect, but a more detailed and controlled study of trainee and trainer prescribing is clearly required.

Discussion with trainer

In one out of five consultations the average trainee recorded that he had discussed, or intended to discuss, the patient with his trainer. How this proportion varied is shown below:

	November	*January*	*March*	*May*
Per cent of consultations discussed with trainer	*34*	*19*	*15*	*11*

As expected, as the trainee year progressed, the need to consult trainers diminished. There was wide variation between doctors in their recorded need for discussion, one factor accounting for this being postgraduate experience.

PER CENT OF CONSULTATIONS DISCUSSED WITH TRAINER

8 doctors qualified on average 5 years	*8 doctors qualified one year*
10	*26*

Another factor determining discussion is the nature of the consultation; malignant disease came highest, and respiratory illness lowest, in the rank order.

We are encouraged that one in five consultations leads to discussion between trainee and trainer. There is more to this one-year experience than self-education.

Discussion

This second study of training content in general practice again shows considerable variation in the number and nature of trainee consultations. The average trainee saw nearly 20 patients each day, which is about half the consultation workload of the average principal in general practice in this region of Scotland—surely an encouraging indication that trainees are not being used as ordinary assistants. Nevertheless, our data again suggest than an occasional trainee is either given too little or too much work, situations that are not conducive to maximum learning.

Not surprisingly, trainees tend to resemble their trainer principals in terms of proportions of new consultations and home visits. Nor was there any evidence that social class of patients, types of illness seen, or prescribing patterns differed markedly from expected distributions. Moreover, two measurements made at the four points in the training year showed behavioural changes which suggest continuous learning; the proportion of first consultations at which no prescription was given by the trainees rose, and the proportion of consultations discussed with the trainer fell.

None of the trainees included in this study had completed a formal vocational training scheme (the first cohort of vocational trainees in the Aberdeen scheme had not reached the general-practice year at the time of this study), but the group of doctors with several years of postgraduate hospital experience clearly felt much less need for discussion with their trainers than did the group who entered the training year immediately after full registration. If this difference is confirmed by the trainees in the vocational scheme, it provides some indirect justification for the preceding hospital years.

The outstanding conclusion from this and our earlier study is how closely, and apparently quickly, trainees adopt the patterns of consultation of their training practices—not very surprising, but of great importance to the future of general practice. Just how lasting these effects of a trainee assistantship are can only be speculative until prospective studies (Freeman and Byrne, 1973) have attempted the necessary measurements, but it seems reasonable to suppose that a good deal of trainee learning must be fairly stable.

Therefore, selection of trainers is of critical importance provided, of course, that firm criteria are available for the selection of good trainers.

Selecting trainers

The Royal College of General Practitioners (1972) has made recommendations on selection of teachers in general terms only and has stressed that rigid criteria are impracticable. What this means in practice is that selection committees have to rely very much on subjective judgments by colleagues of the training potential of a doctor applying for a trainership, backed up by relatively simple objective data about size and nature of practice.

Irvine (1972) devised an elaborate scoring system for assessing teaching suitability, but many of his criteria and assertions can be challenged. At present it is simply not possible to lay down rigorous standards above or below which a practice can be accepted or rejected—the best guide is surely a consensus of doctor peers basing their decision on a little objective information and a lot of subjective information. Certainly in our view the decision to re-select a doctor as a trainer can be assisted by the kind of data we have sought to collect insofar as it constitutes a feed-back, but we would again emphasise that anecdotal information from the trainee may be as valuable. For example, the frequency and nature of trainer-trainee discussion, its content and acceptability to the trainee, and any valid criticisms a trainer can express, will constitute useful material for the selection committee. So far as Scotland is concerned, the Scottish Council for Postgraduate Medical Education has (1972) produced a sensible report on Selection of Postgraduate Teachers of General Practice which must serve as the basis until worthwhile research shows a better way.

REFERENCES

Berkeley, J. S. (1973). *Journal of the Royal College of General Practitioners*, **23**, 428–432.

Berkeley, J. S. & Richardson, I. M. (1973). *Journal of the Royal College of General Practitioners*, **23**, 155–161.

Buchan, I. C. & Richardson, I. M. (1973). *Time Study of Consultations in General Practice*. Scottish Health Service Studies No. 27. Edinburgh: Scottish Home and Health Department.

Freeman, J. & Byrne, P. S. (1973). *The Assessment of Postgraduate Training in General Practice*. London: Society for Research into Higher Education.
Howie, J. G. R., Richardson, I. M., Gill, G. & Durno, D. (1971). *Journal of the Royal College of General Practitioners*, **21**, 657–663.
Irvine, D. (1972). *Teaching Practices*. Reports from General Practice No. 15. London: *Journal of the Royal College of General Practitioners*.
Richardson, I. M. & Howie, J. G. R. (1972). *British Journal of Medical Education*, **6**, 29–31.
Richardson, I. M., Howie, J. G. R., Durno, D., Gill, G. & Dingwall-Fordyce, I. (1973). *Journal of the Royal College of General Practitioners*, **23**, 132–142.
Royal College of General Practitioners (1972). *Journal of the Royal College of General Practitioners*, **22**, 79–86.
Scottish Council for Postgraduate Medical Education (1972). *The Selection of Postgraduate Teachers of General Practice*. Edinburgh.

THE GENERAL PRACTITIONER AND THE WHOLE PERSON

I only want to emphasise the great human importance of all you do. I want to remind you in your dedicated task as doctors of the great human challenge as well as the medical challenge that confronts you. I say this to those in general practice because one of the things that the bystanders see happening in medicine is an increasing specialisation, which needs so many highly trained and specially skilled people to concentrate on one particular organ in the human body, but which ignores the whole frame into which that organ is set.

The general practitioner is still, I believe, concerned with the whole human being. At one time, in Europe, healing was mainly in the hands of the Church and that gave particular meaning to the conventional phrase that we use about people: the need to keep body and soul together. It was a reminder that mankind's problems are mental and spiritual as well as physical, but I would say this, that any doctor who thinks he can tackle the problems of sick human beings in the next 30 years simply by having better apparatus and better medical procedures might as well hand over the whole of his profession to a computer, because I am sure the computer would do it far better than he would. Indeed some in the profession are actually saying something of the sort and suggesting that we should let the computer do the whole of medicine. What I am saying in answer to that is simply that the whole question of what ails man in society today is much more than a question of what afflicts his body, and it is in the confidence that those in general practice could appreciate that point more clearly than perhaps some others, that they will be less willing to hand over the practice of medicine to the computer that I have spoken so solemnly and so seriously on this occasion.

REFERENCE

Hasluck, The Rt Hon. Sir Paul (1973). *Australian Family Physician*, **2**, 7.