Vocational training for general practice in inner London. Is there a dearth? And if so what's to be done?

Tess Harris, Trevor Silver, Elizabeth Rink, Sean Hilton

Abstract

Objective—To identify the nature and extent of any vocational training deficit within the London initiative zone and investigate the reasons.

Design—Collation of statistics and postal questionnaire surveys.

Setting—Thames regions inside and outside the London initiative zone.

Subjects—General practice registrars, trainers, principals from non-training practices, and vocational training course organisers.

Main outcome measures—Trends in numbers of general practice registrars, proportions of trainers, views on current vocational training in inner London.

Results—Numbers of general practice registrars fell significantly between 1988 and 1993 within the London initiative zone and in England overall. The number of registrars within the zone fell by more than in the rest of the Thames regions, where the decline was not statistically significant. A lower proportion of principals were approved as trainers within the zone than in the rest of the Thames regions and England overall. In their responses to the survey (88% of inner London registrars responded and 81% of outer Thames registrars) registrars suggested that improving remuneration and personal safety would make training in London more attractive. Trainers and non-trainers (response rates 89% and 66% respectively) also suggested increasing remuneration for trainers together with more protected time for training.

Conclusions—Less vocational training takes place within the London initiative zone than in the rest of the Thames regions and England overall, although there are discrepancies in official statistics. As well as specific recommendations for improving recruitment to vocational training in inner London, measures to tackle inner city deprivation should also remain high on the political agenda.

selection.⁶ While many practices do deliver a high standard of primary care, the impressions remain of both an underprovision of vocational training in inner London and a fall in uptake of training places in London greater than that in the rest of Britain. If these impressions are true they have serious consequences. A persistent lack of training will slow down improvements in the quality of care provided. High quality training in inner London is required to attract graduates who are enthusiastic about the challenges of training in the inner city and committed to staying on as principals.

This study aimed to identify the nature, extent, and reasons for any vocational training deficit within the London initiative zone (the more deprived area of inner London, defined in *Making London Better*,⁴ with high population needs and weak existing primary care provision, which is currently a focus for new investment). Twelve family health services authorities are inside the zone, five completely and seven partially. The study was commissioned in mid-1994 by the regional advisers in general practice for the four former Thames regions on behalf of the National Health Service Executive.

Methods

Statistics for vocational training were obtained from the National Health Service Executive and the four Thames regional advisers: 1993 was the latest completed year of available statistics, and figures for 1988 were also used to study trends over the preceding five years. 95% Confidence intervals for change in numbers between 1988 and 1993 were based on the exact Poisson distribution for standardised ratios.⁷ For overall numbers of general practitioner registrars in the Thames regions and nationally we used the basic statistics for general medical services,⁸ published by the Department of Health and based on returns from family health services authorities.

Postal questionnaire surveys were carried out on registrars, principals (trainers and non-trainers), and vocational training scheme course organisers within the area covered by the four former Thames regions. Non-respondents were remailed after one month. Semistructured interviews with key players were also conducted as a part of the study, but the results of these interviews are not reported here.

Registrars—Current general practice registrars from within and outside the London initiative zone were compared. Because of high mobility, lists of registrars' names are often inaccurate, so a sampling frame of training practices in the Thames regions was compiled from family health services authorities and the British Postgraduate Medical Federation offices. All training practices within the London initiative zone and a random 50% sample of those from the Thames regions outside the London initiative zone were selected. The

Division of General Practice and Primary Care, St George's Hospital Medical School, London SW17 0RE

Tess Harris, *clinical lecturer in general practice*
Trevor Silver, *honorary senior lecturer in general practice*
Elizabeth Rink, *research manager*
Sean Hilton, *professor of general practice and primary care*

Correspondence to: Dr Harris.

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Introduction

Published data on the availability and quantity of vocational training in inner London and the views of general practice registrars (formerly known as trainees), trainers, and others concerned in vocational training are sparse. Concern about the falling number of registrars nationwide^{1,2} has focused on the uptake of places, but the provision of training places by practices also needs to be considered.

Recent reports have highlighted the problems of inner city general practice,^{3,4} including the unsettling effects of the NHS reforms on London general practice,⁵ and have emphasised the need for improving the fabric and range of general practice in inner London. A lack of training practices is reported in inner London, with many practices having difficulty in reaching nationally approved criteria for trainer

questionnaire was sent via the practice manager, who was asked to photocopy it if there was more than one registrar or return it with "no trainee" written on it if applicable. As well as eliciting views on vocational training and future career intentions, information was collected on demographic variables, medical training, and qualifications.

Trainers and non-trainers—Randomly selected principals from a random 20% sample of non-training practices within the London initiative zone were surveyed to establish their ideas about what might prevent established general practitioners from becoming trainers or their practices from becoming training practices. Questionnaires were sent to one trainer from each training practice within the zone, selected randomly if there was more than one trainer at the practice. In addition to eliciting views on training and recruitment of trainers and registrars, information was collected on demographic variables, year and place of qualification, postgraduate qualifications, length of service as a principal in London, and size of partnership.

Free response questions were coded using a simplified method of content analysis by TH and validated by a second researcher (ER). EPI-INFO was used for data entry and analysis.² χ^2 Analysis, Mantel-Haenszel χ^2 analysis, and *t* test comparison of means were used as appropriate.

Vocational training course organisers—All course organisers in the Thames regions were sent a questionnaire asking about recruitment of general practice registrars.

Results

TRENDS IN REGISTRAR NUMBERS, 1988-93

Nationally the number of registrars receiving certificates from the Joint Committee on Postgraduate Training has fallen from 2177 in 1988-9 to 1997 in 1992-3—a reduction of 8%. Nine per cent fewer registrars were registered with family health services authorities in 1993 than in 1988 in England as a whole.

Table 1—Numbers of registrars in the London initiative zone (LIZ) October 1988 and October 1993 (arranged according to whether the family health services authority (FHSAs) is fully or partially in the zone, the rest of the Thames regions, and England

	Registrars Oct 1988	Registrars Oct 1993	% Change (95% confidence interval)
Complete LIZ area (12 FHSAs*)	196	153	-22% (-3% to -37%)
FHSAs totally within LIZ (5 FHSAs)	80	49	-39% (-12% to -58%)
FHSAs partly within LIZ (7 FHSAs)	116	104	-10% (+18% to -32%)
Thames regions excluding LIZ (11 FHSAs)	261	240	-8% (+10% to -23%)
England	1685	1529	-9% (-3% to -15%)

*Family health services authorities.

Source: *General Medical Services Basic Statistics*, October 1988 and 1993.

Method for calculating 95% confidence intervals based on exact Poisson distribution for standardised ratios.⁷

Table 2—Proportions of principals who are trainers according to whether their family health services authority (FHSAs) is in LIZ, outer Thames region, or England

	Trainers	Principals*	% Of principals who are trainers (range)
FHSAs fully inside LIZ (n=5)	122	1471	8.3 (5.8 to 13.8)
FHSAs partially inside LIZ (n=7)	149	1578	9.4 (6.1 to 12.8)
FHSAs outside LIZ but in Thames regions (n=11)	486	4253	11.4 (7.3 to 19.9)
All FHSAs in England	2996	24 941	12.0

*Includes all full and three quarter time unrestricted principals.

Source: *General Medical Services Basic Statistics*, April 1993.⁸

Table 3—Characteristics of general practice registrars in inner London and the outer Thames regions

	Inner London registrars (n=87) No (%)	Outer Thames region registrars (n=119) No (%)	P value
Age:			
24-29	48 (56)	66 (56)	0.61
30-39	30 (35)	46 (38)	
40-59	8 (9)	7 (6)	
Women	64 (74)	66 (56)	0.01
Married or cohabiting	54 (62)	83 (70)	0.32
With one or more children	21 (24)	39 (33)	0.23
Medical school:			
London	55 (63)	65 (55)	0.43
Outside London	19 (22)	28 (24)	
Outside UK	13 (15)	25 (21)	
In vocational training scheme	45 (52)	67 (56)	0.61
One or more postgraduate qualification*	48 (61)	69 (63)	0.90

Missing values: inner London registrars, age=1; outer Thames region registrars, medical school=1, postgraduate qualifications=1.

*Excluding those who had completed only house jobs.

The number of registrars within the London initiative zone fell by a statistically significant 22% over the same period, whereas the decline in registrar numbers for the rest of the Thames regions was only by a non-significant 8% (table 1).

PROPORTION OF PRINCIPALS WHO ARE APPROVED TRAINERS

The proportion of principals who are approved trainers is lower in family health services authorities fully within the London initiative zone (8.3%) than in those partially within the zone (9.4%) or in the rest of the Thames regions (11.4%) or in England overall (12.0%) ($\chi^2=27$, $P<0.0001$, table 2, 1993 figures.)

REGISTRARS

The survey of inner London general practice registrars was sent to the 109 training practices within the London initiative zone. Nineteen questionnaires were returned "no trainee"; 18 were returned from nine practices with two registrars and 69 from single registrars. If we assume no other practices with two registrars the response rate was 88% (87/99). The survey of outer Thames region registrars was sent to 191 training practices: 48 were returned "no trainee," 8 were returned from four practices with two registrars and 111 were returned from practices with single registrars. On the same assumption, the response rate was 81% (119/147).

The registrars were similar in terms of age, hospital experience, qualifications, and whether or not they were on a formal vocational training scheme. The inner London registrars were significantly more likely to be women; they were less likely to be married and have children than the outer London registrars, but not significantly so (table 3).

Forty eight (55%) inner London and 46 (39%) outer Thames registrars chose the area for their year in general practice because they already lived in the area; 19 (22%) inner London and 19 (16%) outer Thames registrars chose their training practice from personal recommendation. Of seven options listed as "possibly" affecting their registrarship location educational opportunities were most commonly cited (by 67 (77%) inner London and 96 (81%) outer Thames registrars). In response to an open question about working in London positive points made by the inner London registrars were the social life (64) and the mixed patient population (59); negative points were transport (55)

and personal safety (43). In response to an open question on making training in London more attractive the most popular ideas were to increase remuneration (38) and improve personal safety (19). Practical suggestions for improving safety included providing mobile phones for registrars on call, more widespread use of deputising doctors or using an escort car and driver at night, and more training in dealing with violent patients.

When asked about career intentions more of the men than the women were likely to want to become principals immediately on completion of their training (37 (49%) *v* 37 (28%), $P < 0.01$). This was true also of older registrars compared with younger registrars (34 (30%) of 24-29 year olds *v* 27 (36%) of 30-39 year olds and 13 (87%) of 40-59 year olds ($P < 0.001$)). A higher proportion of the outer Thames registrars (50, 42%) than of the inner London registrars (24, 28%) said that they intended to become principals immediately, but after we had controlled for the confounding effect of sex differences this difference was not statistically significant (Mantel-Haenszel $\chi^2 = 2.26$, $P = 0.13$). For both groups of registrars the commonest reasons given for not wanting to become a principal immediately were wanting to do some locums or to go abroad first.

Inner London registrars were more likely to consider working as a principal in London (54, 62%) than outer Thames registrars (19, 16%, $P < 0.001$). However, a higher proportion of outer Thames registrars were likely to consider working as a principal in their own locality (102, 86%, $P < 0.001$). For both groups the commonest reasons for not wanting to practise in London were the disadvantages of city life—traffic, lack of space, expense, and fear of violence.

TRAINERS AND NON-TRAINING PRINCIPALS

The survey of trainers was sent to 109 trainers; one was no longer in practice, and 96 responded, giving a response rate of 89%. The survey of principals from non-training practices was sent to 199 principals; two had become trainers and so were excluded, and the response rate was 66% (130/197).

Trainers were on average younger and had qualified more recently than principals from non-training practices, but there was no difference in time spent as principals in London. A greater proportion of trainers (34%) than non-training principals (22%) were women. Trainers were more likely to have completed their training in the UK and have postgraduate qualifications (including membership of the Royal College of General Practitioners) than non-trainers. Training practices had more principals than non-training practices; only 5% of trainers were singlehanded (table 4).

In view of the lower response rate from principals in non-training practices responders and non-responders from this sample were compared on practice size (available for all 67 non-responders), and on place of qualification and possession of postgraduate qualifications (available for two thirds of non-responders (45) from the *Medical Register*). Of the non-responders, 46% (31) were singlehanded, 51% (23) qualified outside the UK, and 47% (21) had no postgraduate qualifications. None of these was significantly different from the findings in responders.

Seventy seven (80%) trainers had a general practice registrar in the practice at the time of the survey; only 11 of the 96 were unable to find a suitable candidate. However, 67 (70%) thought it was becoming more difficult, mainly because fewer registrars were applying. A decrease in the overall standard of applicants was reported by 13 (14%). In response to open questions on the advantages and disadvantages of

training most trainers (80, 83%) felt there were educational benefits in being a trainer, as well as benefits to the practice from the extra pair of hands (33, 34%) and the introduction of new ideas (26, 27%). Disadvantages included the time involved (88, 92%) and added stress (35, 37%).

Six of the non-training principals had previously been trainers. They had given up because of inadequate payment, lack of feedback from training, age, increasing workload, taking on a course organiser's job, and failure to be reappointed. A further seven (5%) had previously applied to be a trainer: three had been successful but had never been trainers owing to increased workload; two had been rejected for lack of experience and for having an unstable partnership; one had dropped out after applying; and one was awaiting the outcome of his application.

Half the non-training principals (65) were interested in becoming trainers, but the main obstacles were lack of time (32, 49%) and qualifications (11, 17%), usually membership of the Royal College of General Practitioners. Twenty eight (43%) thought there were no obstacles for their practice, but concerns about the adequacy of premises were mentioned by 25 (39%). Of those not interested in becoming trainers 35 (54%) cited lack of time as the reason. In response to an open question asking how more London principals could be encouraged to become trainers, more remuneration was suggested by the greatest number of trainers (46, 48%) and non-trainers (48, 37%), and protected time was mentioned by a quarter of each group. Similarly, to encourage more registrars to work in inner London, remuneration was again most frequently mentioned (by 35 (37%) trainers and 29 (22%) non-trainers), with political solutions for improving primary care in London also mentioned by both groups (by 27 trainers and 28 non-trainers). Over a third of trainers (34) thought that public relations needed to be improved, with more attention being given to marketing general practice to medical students and junior doctors.

VOCATIONAL TRAINING COURSE ORGANISERS

The survey of course organisers in the Thames

Table 4—Comparison of trainers and principals from non-training practices in inner London

	Trainers (n=96) No (%)	Non-trainers (n=130) No (%)	P value
Age:			
20-34	7 (7)	9 (7)	0.005
35-44	44 (46)	39 (31)	
45-54	32 (33)	36 (28)	
55-69	13 (14)	43 (34)	
Women	33 (34)	28 (22)	0.05
Medical school:			
London	67 (71)	42 (33)	<0.0001
Outside London	21 (22)	26 (20)	
Outside UK	7 (7)	61 (47)	
Postgraduate qualifications:			
MRCGP	61 (64)	24 (18)	<0.0001
DCH	18 (19)	7 (5)	
DRCOG	40 (42)	42 (32)	0.19
MRCP	17 (18)	10 (8)	0.04
Others	24 (25)	41 (32)	0.35
None	13 (14)	43 (33)	0.001
No of principals in practice:			
1	5 (5)	65 (50)	<0.0001
2-3	24 (25)	51 (40)	
4-5	43 (45)	12 (9)	
≥6	24 (25)	1 (1)	
Mean (SD) years qualified	20.3 (7.4)	23.8 (9.6)	0.004
Mean (SD) years as London principal	13.9 (7.0)	13.2 (9.1)	0.53

Missing values: trainers, medical school=1; non-trainers, age=3, medical school=1, No of principals in practice=1.

regions produced a 65% response rate (71/109). Virtually all reported a trend towards fewer applicants, both for formal and self constructed vocational training schemes. Some reported filling vacancies with overseas registrars, particularly from Holland and Germany. The many reasons offered for difficulties in recruitment were grouped into three themes. The first was working conditions: increased workload; out of hours commitment; and low pay on entering the practice component of training. The second was low morale and status because of a rise in patient expectations and complaints and the denigration of general practice by hospital doctors. The third was specific to inner city recruitment: problems including violence, poor quality schools, and the high cost of accommodation.

The organisers' views on what could be done to improve the situation were also grouped into three main themes. Firstly, to improve vocational training they suggested encouraging flexibility in training as far as legislation permits; increasing the general practice component of training to 18 months; encouraging more academic registrarships and exchange visits to urban practices between registrars; and abolishing the pay differentials between junior hospital and vocational training posts. Secondly, to improve general practice as a career they suggested involving ordinary general practitioners in research; investing in primary care; and developing general practitioners' special skills. Finally, their more general recommendations included taking steps to reduce violence towards general practitioners; providing more resources to improve the fabric of practices; making patients' demands, expectations, and complaints more realistic; and increasing the time spent in general practice for medical students.

Discussion

Against a background of falling numbers of general practice registrars, the numbers in the London initiative zone showed a significant decline of 22% between 1988 and 1993 compared with a non-significant fall of 8% for the rest of the Thames regions. We used the general medical services figures as they are the published manpower statistics and gave us national data as well as data for the Thames regions. Nevertheless, caution is needed in interpretation as the figures available directly from regional advisers differed, especially for Lambeth, Southwark, and Lewisham. The regional adviser for South East Thames gave 15 as the number of registrars for the year 1993-4; the general medical services figure for 1 October 1993 was 0. Ideally we would have liked to compare systematically the general medical services and regional advisers' figures for 1988 and 1993 for the London initiative zone, Thames regions, and England, but we could not obtain the complete data required to do this. We understand that since September 1994 regional advisers have been asked to report their figures on registrar numbers directly to the Department of Health annually. Thus, any inconsistencies in the data from family health services authorities and regional advisers will be apparent. Analysis of the general medical services data for October 1994, made available since the completion of our study, also confirms the 1993 findings.⁸

Figures on the proportion of principals who are approved trainers from the general medical services statistics show evidence of a lower proportion within the London initiative zone than in the rest of the Thames regions and England. This association may be at least partly explained by the larger number of singlehanded practices within the London initiative zone. We were unable to control for this possible

Key messages

- The number of registrars in general practice in inner London has fallen recently: 70% of inner London trainers reported difficulties in recruiting registrars
- The proportion of general practice principals who are approved trainers is lower in inner London than in the rest of the Thames regions or England
- Increased remuneration and improvements to personal safety are required to attract registrars to inner London
- Only 28% of inner London general practice registrars intend to become principals immediately on completion of their training
- Increased remuneration and protected time for training are required to encourage more principals to become trainers

confounding factor as figures for trainers broken down by partnership size are not available from general medical services basic statistics.

Thus, there is some evidence of a dearth of vocational training within the London initiative zone in comparison with the remainder of the Thames regions and with England as a whole. This lack is particularly pronounced in certain parts of London but overall is not as great as anecdotal evidence seemed to suggest. The problems identified by our surveys are likely to exist in other inner city areas of the United Kingdom, although no comparable studies could be traced. Nevertheless, evidence is accumulating that lack of vocational training is a problem across the UK.²⁹

The high response rates of registrars suggest their concern over training issues. Their ideas on how to make training in London more attractive, by increasing remuneration and improving personal safety, should be addressed by those concerned to attract registrars into London. The 1991 North West Thames survey found that only 28% of registrars would consider working in inner London.¹⁰ Our registrars were from all the Thames regions, but a similar overall proportion (35%, 73) said they would consider working in London—16% inner London registrars and 62% outer Thames registrars. The 1991 survey found that 53% intended to enter general practice straight after training,¹⁰ whereas our survey found only 36% overall had this immediate intention (42% from outer Thames region and 28% from inner London), suggesting a decrease over the last few years. This finding of a reluctance of registrars to become principals straightaway corresponds with the findings of a recent study which showed a pool of vocationally trained doctors in Trent region not practising as principals in general practice.¹¹

The high response rate among trainers (89%) also implies concern over training issues. The view that there is a scarcity of registrars and that the standard of applicants is falling must be treated seriously. Training is time consuming, and this was viewed as the major disadvantage to current trainers and the major barrier for non-trainers.

CONCLUSIONS

Firstly, registrars suggested that increased remuneration for working in London and more practical measures to improve their personal safety would promote recruitment of registrars in London. Secondly, trainers and non-training principals also advocated increased remuneration for trainers along

with allowing more protected time for training to encourage more London principals to become trainers; providing more political solutions for primary care in London; and improving the marketing of general practice to medical students and junior doctors in London. Thirdly, recommendations from the course organisers included increasing the general practice component of training to 18 months; encouraging more flexibility in part-time training; making it possible for all registrars to undertake a component of their general practice time in an urban practice; and creating more academic and research posts in London to encourage registrars not currently wanting to become principals to continue working in the inner city.

Government funding for educational flexibility in the London initiative zone over the next two years will enable some of these issues to be addressed. In addition, data on numbers of general practice registrars need to be collected and collated in a more uniform way; this should be partially addressed by the new reporting mechanism, but this will need to be monitored. Finally, any recommendations for vocational training cannot be viewed in isolation from the wider demands of general practice in inner London, in particular immediate improvements in safety for doctors

in high risk areas and long term measures to tackle inner city social deprivation.

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Measles and rubella misdiagnosed in infants as exanthem subitum (roseola infantum)

Dereck R Tait, Katherine N Ward, David W G Brown, Elizabeth Miller

Department of Virology,
Royal Postgraduate
Medical School, University
of London, London
W12 0NN

Dereck R Tait, senior
registrar
Katherine N Ward, senior
lecturer/honorary consultant

Enteric and Respiratory
Virus Division, Virus
Reference Division, Public
Health Laboratory Service
Central Public Health
Laboratory, London
NW9 5HT

David W G Brown,
consultant virologist

Immunisation Division,
PHLS, Communicable
Disease Surveillance
Centre, London NW9 5EQ
Elizabeth Miller, consultant
epidemiologist

Correspondence to:
Dr Ward.

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Human herpesvirus-6 is widespread throughout human populations, with primary infection usually occurring in infants aged 40-60 weeks.¹ Primary infection may be asymptomatic but where there is disease the classic presentation is of the common childhood illness exanthem subitum (roseola infantum).² This begins with a sudden fever of about 40°C perhaps accompanied by febrile convulsions; the child appears surprisingly well with few other clinical findings apart from leucopenia. The fever resolves after three to five days coincident with the sudden appearance of a finely macular rose rash that may be transient but usually persists for two days. The exanthem is prominent over the thighs and buttocks, where each macule is sometimes surrounded by a fine halo. Despite detailed descriptions, however, exanthem subitum tends to be confused with measles and rubella.³ Two recent studies have shown that measles and rubella are themselves commonly misdiagnosed,^{4,5} with only 11% of clinical cases of measles in infants under 1 year being validated by laboratory tests.⁴ To investigate whether many of the misdiagnosed cases of measles and rubella in early childhood were in fact exanthem subitum, serum samples from children under 2 years old with rashes shown not to be measles or rubella^{4,5} were tested for laboratory evidence of recent primary human herpesvirus-6 infection.

Subjects, methods, and results

A single serum sample was collected from each of 103 children aged 10-120 weeks notified as having clinically diagnosed measles⁴ or rubella⁵ (67 and 36 children respectively). Samples were taken a mean of 30 days after the onset of illness and were known not to contain IgM specific for measles, rubella, and human parvovirus B19^{4,5}—the cause of "fifth disease," another

common childhood exanthem. An indirect immunofluorescence test for human herpesvirus-6 IgG was used to detect low avidity antibody.¹ The results were compared by using logistic regression with those previously obtained with control samples from randomly selected children of the same age.¹

Of the 103 children with rashes, 88 (85%) were seropositive for human herpesvirus-6, and of these 40 (39%) had low avidity antibody; in both cases the highest numbers were at about 50 weeks (figure). The proportion of serum samples with low avidity IgG was significantly higher in the children with rashes than in the historical controls (age adjusted odds ratio=3.68, 95% confidence interval 1.96 to 6.88, $P<0.001$). Among children aged under 1 year, 27

Antibody status and age distribution of the children with rashes and of the historical controls