

What makes general practitioners do child health surveillance?

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Abstract

The contribution of different general practitioner characteristics, views, and experiences to the likelihood of their providing child health surveillance (CHS) was determined and their perceived training needs discovered. Family health service authority administrative data on the study population was combined with a postal questionnaire survey. Subjects were all general practitioners in three district health authorities in the North West Thames region.

There were striking differences between districts in the proportion of practitioners undertaking CHS. General practitioners with paediatric training were three times more likely to do CHS. Women doctors were twice as likely to do CHS as men. The personal views of general practitioners were significantly associated with whether or not they undertook CHS. The CHS fee did not appear to be the major motivating factor. There was considerable demand for further training.

The proportion of general practitioners undertaking CHS is likely to increase with the proportion of women and vocationally trained doctors. More local training is wanted, both by general practitioners already doing CHS and by those who would like to do it. Health authorities need to ensure that such training is convenient and continuing.

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Child health surveillance (CHS) aims to monitor growth and development in the preschool years, detect abnormalities, and promote optimum health.^{1,2} The responsibility of family doctors for CHS was endorsed by *Promoting Better Health* in 1987.³ The new general practitioner contract in 1990 provided for the first time a specific financial incentive to provide CHS.⁴ General practitioners approved to carry out CHS can claim a fee of £10 per child per year.

In January 1992, 55% of general practitioners in the UK said that they provided CHS personally and 83% that it was available in their practice.⁵ Many doctors were already providing CHS before the introduction of the new contract, but their numbers are unknown.⁶

District health authorities are faced with the challenge of being responsible for a service that increasingly is undertaken by independent contractors. Government policy that parents

should be able to choose between practice and community child health clinics³ implies the continued existence of a dual service. District health authorities, family health service authorities, and community providers have to work together to ensure the availability of staff and premises for surveillance of children whose family doctor is unable or unwilling to provide CHS, and to balance parental choice against wasteful duplication.⁷

Even where the majority of CHS is carried out by general practitioners, community services are still needed to deal with child protection, fostering and adoption, disabilities, and special needs.⁸ Community paediatricians in many districts have built up an important role in training and supervising other professionals to carry out CHS. The continuation of a secondary referral service for CHS must be also assured.

The aim of this study was to determine the contribution of different practitioner characteristics, their views and their experiences to the likelihood of their providing CHS, and to explore their perceived training needs.

Methods

Three district health authorities in North West Thames region were selected to represent a range of socioeconomic characteristics. Parkside is a large urban district including severely deprived areas, the inner city part of the district falling within Kensington, Chelsea, and Westminster (KCW) family health service authority and the suburban areas within Brent and Harrow family health service authority. Barnet is a more affluent suburban district, while South Bedfordshire is largely rural with pockets of deprivation. All 602 general practitioners in the 319 practices in these three districts were included in the study.

Data were collected in two ways. Questionnaires were sent to all doctors via the family health service authorities in the summer of 1991; information was collected on their paediatric training and experience, attendance at training courses, and their involvement in and views on CHS. Data were then obtained directly from the family health service authorities on practitioner and practice characteristics (age and sex, number of partners, list size). Whether a doctor provided a CHS service was determined by reference to the family health service authority CHS list.

The effect of each single characteristic on the probability of a doctor providing CHS was estimated using the Epi-Info statistical

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Table 1 General practitioners and practices providing CHS by selected characteristics

	General practitioners (%)	Practices (%)
District		
South Bedfordshire	80	96
Barnet	49	64
Parkside	37	43
Parkside (Brent and Harrow)	43	50
Parkside (KCW)	29	37
No of partners		
Single handed	43	43
2	47	58
3	49	77
4	56	82
≥5	64	88
Age (years)		
≤30	80	
31-40	68	
41-50	57	
51-60	40	
≥61	12	
Sex		
Female	62	
Male	46	

package.⁹ Differences in percentages reported below, where confidence intervals (CI) are not given, were significant $p < 0.001$ using the χ^2 test for difference of proportions or trend in proportions. The independence of apparent differences was tested by logistic regression using Nanostat.¹⁰

Results

PERSONAL AND PRACTICE CHARACTERISTICS: FAMILY HEALTH SERVICE AUTHORITY DATA

Data from the family health service authorities were available on 97% (584) of the study population. Mean age of general practitioners was 47 years, average list size was 2057 per doctor and 6618 per practice. The average size of practices was two partners. Altogether 36% of all doctors were women and 52% were on the CHS list of the relevant family health service authority. Fifty seven per cent of all practices had at least one partner on the CHS list.

Four fifths of general practitioners in South Bedfordshire were on the CHS list, compared with 29% in Parkside (KCW) (table 1). The likelihood of doing CHS decreased with increasing age. Doctors who were on the CHS list were on average seven years younger (95% CI 5.5 to 8.8 years) than those not on the list. Women doctors were 1.4 times more likely to do CHS than men.

There was a positive relationship between a doctor being on the CHS list and the number of partners in their practice; comparison of

practice list size, but not individual list size, showed a similar trend. Similarly, the proportion of practices with at least one partner on the CHS list increased with the size of the practice.

TRAINING AND ATTITUDES: QUESTIONNAIRE

Overall response to the questionnaire was 73% (440). Response was highest in South Bedfordshire and lowest in Parkside. The doctors who replied to the questionnaire were on average 4.5 years younger (95% CI 2.6 to 6.3 years) than non-respondents. They were more likely to be women (difference 13%: 95% CI 5 to 22%) and to be on the CHS list (difference 22%: 95% CI 13 to 31%). Respondents were also more likely to work in larger practices (difference 0.6 partners: 95% CI 0.2 to 0.9).

Forty per cent of all respondents had held a senior house officer (SHO) post in paediatrics (including community child health) while 16% had relevant experience as part of their vocational training or since qualifying. Seventy two per cent of those with relevant SHO experience were on the CHS list, compared with 38% of those without. Half of all respondents had attended a CHS training course in the last five years, and 84% of these were on the CHS list.

Respondents reported their attitude to a series of statements about CHS on a five point scale, a score of +2 representing strong agreement and -2 strong disagreement with indifference scoring 0 (table 2). While the mean scores for all practitioners showed positive attitudes towards CHS, the views of those actually doing CHS were generally more favourable. Those doing CHS were less likely to consider it adequately paid, while there was no difference on whether CHS involved too much paperwork. Twice as many of those reporting generally favourable attitudes were on the CHS list as those reporting less favourable attitudes.

LOGISTIC REGRESSION: FAMILY HEALTH SERVICE AUTHORITY AND QUESTIONNAIRE DATA COMBINED

Logistic regression (table 3) showed that the likelihood of doing CHS differed most with location. The odds ratio for South Bedfordshire was 14 relative to Parkside (KCW) after controlling for age, sex, number of partners, paediatric training, and enjoyment of CHS. The probability of providing CHS decreased with increasing age, doctors aged over 60 being nine times less likely than those aged 30 or under. The odds of a woman doctor being on the CHS list were twice those for a man. List size and number of partners had no effect when the preceding factors were taken into account.

The odds of doing CHS increased almost three times with paediatric SHO experience. A general practitioner recording strong agreement with the statement 'CHS is enjoyable to do' was seven times more likely to do CHS than one recording strong disagreement. This

Table 2 Views of general practitioners on CHS by whether on CHS list: mean attitude scores

Statement about CHS	All	On CHS list	Not on CHS list	Difference (95% CI)
Is an important part of general practice	1.17	1.35	0.92	0.43 (0.23 to 0.64)
Should ideally be done by the family's general practitioner	1.13	1.32	0.88	0.44 (0.24 to 0.64)
Helps build a good relationship with family	1.42	1.52	1.28	0.24 (0.07 to 0.40)
Is enjoyable to do	0.79	1.05	0.41	0.64 (0.41 to 0.87)
Is a cost effective use of general practitioner's time	-0.33	-0.18	-0.53	0.35 (0.09 to 0.61)
Is adequately paid	-1.13	-1.23	-0.98	-0.25 (-0.47 to -0.02)
Involves too much paperwork	0.79	0.76	0.83	-0.07 (-0.33 to 0.17)

Table 3 Factors associated with being on CHS list: odds ratio (logistic regression: n=399)

	Odds ratio (95% CI)
District	
South Bedfordshire	13.63 (6.07 to 30.59)
Barnet	2.40 (1.20 to 4.79)
Parkside (Brent and Harrow)	2.12 (1.02 to 4.42)
Parkside (KCW)	1
Age (years)	
≤30	1
31-40	1.11 (0.18 to 6.75)
41-50	0.70 (0.11 to 4.36)
51-60	0.87 (0.14 to 5.57)
≥61	0.11 (0.01 to 0.94)
Sex	
Female	2.11 (1.26 to 3.54)
Male	1
Paediatric SHO post	
Yes	2.85 (1.69 to 4.81)
No	1
Enjoys doing CHS (per point on attitude scale)	1.62 (1.30 to 2.02)

variable was highly correlated with other favourable attitudes and showed the greatest difference between CHS providers and non-providers.

FURTHER TRAINING NEEDS

Forty four per cent of the respondents doing CHS thought that they would benefit from further training. Of 112 topics mentioned, the most prominent were general refresher or 'hands on' practice (32% together) and surveillance of hearing (19%) and vision (14%). Other topics mentioned included specific screening tests and abnormalities (for example congenital dislocation of the hip) and child development in general (table 4). Having had a paediatric SHO post or attending a CHS course made no significant difference to the proportion of respondents doing CHS who wanted further training.

The respondents who were not doing CHS were asked whether they would do so if there were more opportunity or incentive to refresh their skills; 47% said they would. The main reasons volunteered for wanting to do CHS but not yet doing so were the availability and convenience of training courses (29% of all comments). Other considerations were shortage of time (16% of all comments) and doubts as to the clinical value of CHS (13%). Only a few respondents mentioned inadequate pay, too much paperwork, or lack of space or staff. Almost a quarter of doctors answering this question did not intend to do CHS because one or more of their partners did so.

Table 4 Suggested topics for further CHS training

Topic	No (%) of mentions
General refresher or update	25 (22)
Hearing screening	21 (19)
Vision screening	16 (14)
Child development	9 (8)
'Hands on' practice	9 (8)
Physical abnormalities	5 (4)
Specific 'checks', for example 3 months	5 (4)
Behavioural problems	3 (3)
CHS organisation and paperwork	3 (3)
Detection of child abuse	3 (3)
Speech and language	3 (3)
Other topics	10 (9)
All topics mentioned	112 (100)

Discussion

Our results confirm that general practitioners generally consider CHS to be beneficial and see it as an integral part of general practice. The response rate to our questionnaire was high, but it is likely that the 27% who did not reply were less favourably disposed towards CHS than those who did. Not surprisingly, those doctors providing CHS showed more favourable attitudes towards it. They had a stronger negative view of the level of remuneration than those who did not do CHS, perhaps because they were more aware of the consequent workload than those not directly involved. Combined with the small proportion citing low pay as a reason for not doing CHS, this suggests that the present size of the fee is not the major determinant of whether general practitioners join the CHS list.

Although doctors in larger practices were more likely to do CHS than those in smaller or single handed practices, this was found to be an effect of the age and sex of the partners. The effect of age, which was also shown in the British Medical Association's national survey,⁵ to some extent reflects the difference between recently trained doctors whose experience included a paediatric SHO post and those trained before such experience became common. The proportion of doctors with relevant SHO experience in this study is consistent with studies of general practitioner training.^{11 12} The demand for training even among general practitioners with relevant prior experience has also been noted in other studies.¹³

Female general practitioners were more likely than male to do CHS. While women respondents reported significantly more favourable attitudes to CHS than men, the persistence of a sex difference among those actually doing CHS suggests that individual preference was not the only factor. Female doctors may be affected by the gender role expectations of parents and of their male colleagues.

Differences between the study districts were not accounted for by doctor or practice characteristics. These differences may reflect socio-economic, geographical, or service factors. Neither the criteria for admission to the CHS list used by the four family health service authorities, nor the CHS schedules in the three district health authorities, showed any substantial variation. Compared with the two London district health authorities, South Bedfordshire's more scattered population and tradition of rural family practice may have favoured general practitioner involvement in CHS even before the advent of the 1990 contract. *Your Choices For The Future* showed that rural practices were more likely to provide CHS, intrapartum care, and minor surgery than inner city practices.⁵

Among respondents not providing CHS for their patients, a substantial proportion expressed willingness to do so if their were opportunities for the appropriate training. Many theoretical and practical courses have been held in the last two years but this survey suggested that the number of general

practitioners doing CHS could be increased by providing more training at convenient times and locations. Health authorities need to ensure that adequate and continuing training for doctors doing CHS is available.

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- 1 Butler J. *Child health surveillance in primary care: a critical review*. London: HMSO, 1989.
- 2 Hall DMB, ed. *Health for all children: a programme for child health surveillance*. 2nd Ed. Oxford: Oxford University Press, 1991.
- 3 Secretaries of State for Social Services, Wales, Northern Ireland, Scotland. *Promoting better health: the government's programme for improving primary health care*. London: HMSO, 1987.
- 4 Department of Health, Welsh Office. *General practice in the National Health Service: the 1990 contract*. London: Department of Health, 1989.
- 5 Electoral Reform Ballot Services. *Your choices for the future: a survey of GP opinion. UK report*. London: General Medical Services Committee, 1992.
- 6 Evans A, Maskrey N, Nolan P. Admission to child health surveillance lists: the views of FHSA general managers and general practitioners. *BMJ* 1991; **303**: 229-32.
- 7 Department of Health. *Child health surveillance: implementation of the new GP contract*. EL(90)P/36. London: Department of Health, 1990.
- 8 Department of Health, British Medical Association. *Interim report of the joint working party on medical services for children*. London: BMA, 1992.
- 9 Centers for Disease Control. *Epi-Info v5.01a*. Atlanta, Georgia: Centers for Disease Control, 1991.
- 10 *Nanostat vP5.0a*. London: Alphabridge Ltd, 1989.
- 11 Marsh GN, Russell D, Russell IT. Is paediatrics safe in general practitioners' hands? A study in the north of England. *J R Coll Gen Pract* 1989; **39**: 138-41.
- 12 Polnay L, Pringle M. General practitioner training in paediatrics in the Trent region. *BMJ* 1989; **298**: 1434-6.
- 13 Goodhart L. General practitioner training needs for child health surveillance. *Arch Dis Child* 1991; **66**: 728-30.