

Home visiting by general practitioners in England and Wales

Paul Aylin, F Azeem Majeed, Derek G Cook

Abstract

Objective—To use data from the fourth national survey of morbidity in general practice to investigate the association between home visiting rates and patients' characteristics.

Design—Survey of diagnostic data on all home visits by general practitioners.

Setting—60 general practices in England and Wales.

Subjects—502 493 patients visited at home between September 1991 and August 1992.

Main outcome measures—Home visiting rates per 1000 patient years and home visiting ratios standardised for age and sex.

Results—10.1% (139 801/1 378 510) of contacts with general practitioners took place in patients' homes. The average annual home visiting rate was 299/1000 patient years. Rates showed a J shaped relation with age and were lowest in people aged 16-24 years (103/1000) and highest in people aged ≥ 85 years (3009/1000). 1.3% of patients were visited five or more times and received 39% of visits. Age and sex standardised home visiting ratios increased from 69 (95% confidence interval 68 to 70) in social class I to 129 (128 to 130) in social class V. The commonest diagnostic group was diseases of the respiratory system. In older age groups, diseases of the circulatory system was also a common diagnostic group. Standardised home visiting ratios for the 60 practices in the study varied nearly eightfold, from 28 to 218 (inter-quartile range 67 to 126).

Conclusions—Home visits remain an important component of general practitioners' workload. As well as the strong associations between home visiting rates and patient characteristics, there were also large differences between practices in home visiting rates. A small number of patients received a disproportionately high number of home visits. Further investigation of patients with high home visiting rates may help to explain the large differences in workload between general practices and help in allocation of resources to practices.

Introduction

Although rates of home visiting by general practitioners have declined over the past 30 years, home visiting remains an important feature of British general practice and is one of the factors that distinguishes primary care in Britain from primary care in many other Western countries.¹⁻⁵ Even though rates of consultation in patients' homes are much lower than rates of consultations in the surgery, home visits (both in and out of routine surgery hours) take up a significant amount of general practitioners' time and are still a major component of the workload of general practitioners.⁶ With a few exceptions,²⁻⁴ most previous studies of home visiting by general practitioners have used data from only one practice. Because of the large variations between

practices in many activities, findings from one practice are difficult to generalise to other practices.³⁻⁷ Another limitation of previous work on home visiting by general practitioners is the different definitions of home visits. The fourth national survey of morbidity in general practice collected data on consultations in 60 general practices and used a standardised definition of home visits. The recent availability of data from this survey allowed us to investigate the association between home visiting rates and patient characteristics such as age, sex, social class, and ethnicity; to determine the diseases and conditions for which general practitioners carried out home visits; and to examine the variation in home visiting rates among practices.

Methods

The data for this study came from the fourth national survey of morbidity in general practice, which was carried out between September 1991 and August 1992.⁸ The main objective of the survey was to describe the pattern of disease seen by general practitioners by the age, sex, socioeconomic status, and ethnic status of the patient. The survey covered a 1% sample of the population of England and Wales (502 493 patients; 468 042 person years at risk) registered with 60 practices that volunteered to take part in the survey. The sample was representative of the population of England and Wales for most social characteristics, but there was some underrepresentation of ethnic minority groups and people living alone. A validation study carried out at the end of the survey showed that 96% of contacts with a doctor in the surgery and 95% of contacts in patients' homes were reported, and that 93% of diagnoses were correctly recorded. Socioeconomic information was collected on 83% of the patients in the sample. For this study, we used data from the morbidity survey on home visits (defined as face to face contacts with a doctor that took place in the patient's home, whether in normal surgery hours or out of hours). For each visit, the general practitioner's diagnosis was coded using the ninth revision of the international classification of diseases (ICD-9). During home visits in which the patient presented with more than one problem, the general practitioner recorded more than one diagnosis; hence the number of diagnoses is greater than the number of home visits. Because not all patients were registered with a practice for the whole year of the study, rates are expressed per 1000 patient years at risk. Where appropriate, age and sex standardised home visiting ratios, calculated using indirect standardisation,⁹ are presented. The average ratio for all patients in the study is 100. Confidence intervals for the standardised ratios were calculated using the method described by Morris and Gardner.¹⁰

Results

The annual home visiting rate was 299 per 1000 patient years (139 801 visits during 468 042 patient years), with home visits accounting for 10.1% (139 801 out of 1 378 510) of all contacts with general practi-

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tioners. There was a J shaped relation between age and home visiting rates (fig 1). The home visiting rate decreased from 477/1000 in children aged 0-4 years to 103/1000 in people aged 16-24 years, increasing to 3009/1000 in people aged 85 years and over, a nearly 30-fold difference. Rates were higher in females than in males in every age group except children aged 0-4 years. Of the 502 493 patients in the study, 62 938 (12.5%) were visited at least once at home by a general practitioner during the 12 month duration of the study, and of those who were visited, 60% (37 827/62 938) required only one home visit. Patients who required frequent home visits (five or more home visits during the study) were most likely to be aged 65 years or over. There were also a few children who required more than five home visits (fig 2). In total, 1.3% (6502/502 493) of all patients in the study required five or more visits and received 39% (54 546/139 801) of all visits. A very small percentage of all patients (0.3%, 1659/502 493) required 10 or more home visits and received nearly 17% (23 853/139 801) of all home visits made during the study.

There was a social class gradient in home visiting rates, with age and sex standardised home visiting ratios highest among people in social class V and lowest in people in social class I (table 1). Overall, there was a nearly twofold difference in home visiting ratios between these two social classes. Home visiting ratios were highest in people from Pakistani and African ethnic groups and lowest in people from Chinese ethnic groups. Home visiting ratios were also higher in people who lived in urban areas than those who lived in rural areas.

Diseases of the respiratory system (ICD-9 chapter VIII) was the commonest category of diagnosis made during home visits (table 2). This category of diagnosis

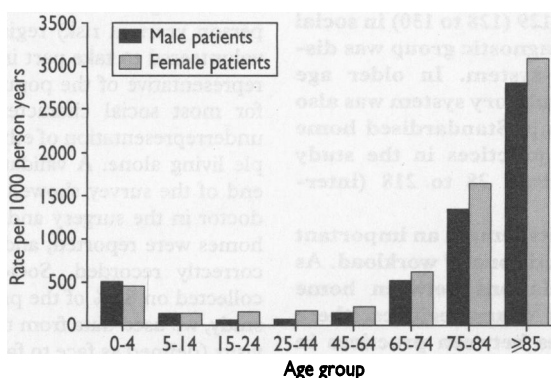


Fig 1—Home visiting rates per 1000 patient years by age group and sex

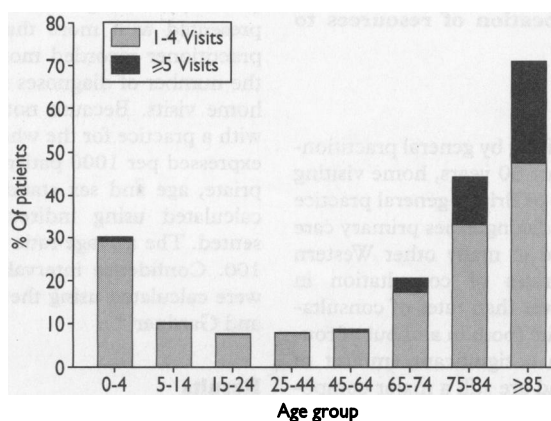


Fig 2—Percentage of patients requiring home visits. Denominator adjusted to take account of patients not present for whole year of study

Table 1—Age and sex standardised home visiting ratios by social class, ethnic group, and urban or rural residence (average ratio for all patients in study = 100)

	Home visiting ratio (95% confidence interval)
Social class	
I	69.3 (68.3 to 70.3)
II	83.1 (82.5 to 83.7)
III (non-manual)	90.3 (89.6 to 91.0)
III (manual)	108.5 (107.9 to 109.1)
IV	119.5 (118.7 to 120.3)
V	129.0 (127.7 to 130.2)
Other	124.6 (123.6 to 125.5)
Not known	79.8 (79.2 to 80.5)
Ethnic group*	
White	103.4 (103.1 to 103.7)
Black Caribbean	106.3 (100.7 to 111.8)
Black African	121.9 (111.1 to 132.6)
Indian	112.0 (107.3 to 116.8)
Pakistani	141.5 (133.3 to 149.7)
Bangladeshi	116.8 (105.1 to 128.6)
Sri Lankan	88.2 (71.9 to 104.6)
Chinese	45.7 (41.0 to 50.4)
Other non-white	104.0 (98.3 to 109.7)
Not known	79.1 (78.4 to 79.7)
Residence†	
Urban	101.7 (101.5 to 102.0)
Rural	88.0 (87.2 to 88.7)
Not known	94.9 (93.1 to 96.7)

*Based on the groupings used in 1991 census.

†Based on Department of Environment classification.

Table 2—Commonest diagnoses made during home visits

Age group	% Of diagnoses in age group
0-15 years (n = 25 675)	
Diseases of respiratory system	40.8
Infectious and parasitic diseases	17.9
Symptoms, signs, and ill defined conditions	12.3
Diseases of nervous system and sense organs	11.9
Injury and poisoning	3.1
All other diagnoses	14.0
16-44 years (n = 25 495)	
Diseases of respiratory system	18.2
Immunisation, surveillance, and antenatal care	12.5
Symptoms, signs, and ill defined conditions	11.2
Infectious and parasitic diseases	8.7
Injury and poisoning	6.2
All other diagnoses	43.2
45-64 years (n = 19 615)	
Diseases of respiratory system	19.2
Symptoms, signs, and ill defined conditions	10.8
Diseases of circulatory system	10.0
Diseases of musculoskeletal system and connective tissue	8.8
Neoplasms	7.3
All other diagnoses	43.9
65 years and over (n = 94 176)	
Diseases of respiratory system	17.0
Diseases of circulatory system	16.1
Symptoms, signs, and ill defined conditions	9.7
Diseases of musculoskeletal system and connective tissue	9.4
Mental disorders	6.0
All other diagnoses	41.8

was made in about 40% of home visits in children and in just under a fifth of visits in other age groups. In patients aged over 45, diseases of the circulatory system (ICD-9 chapter VII) was also a common category of diagnosis. In 11% (17 280/139 801) of home visits, the category of diagnosis was symptoms, signs, and ill defined conditions (ICD-9 chapter XVI).

A large variation in home visiting ratios among practices remained after standardisation for age and sex. The distribution of standardised home visiting ratios was positively skewed and ranged from 28 to 218 (inter-

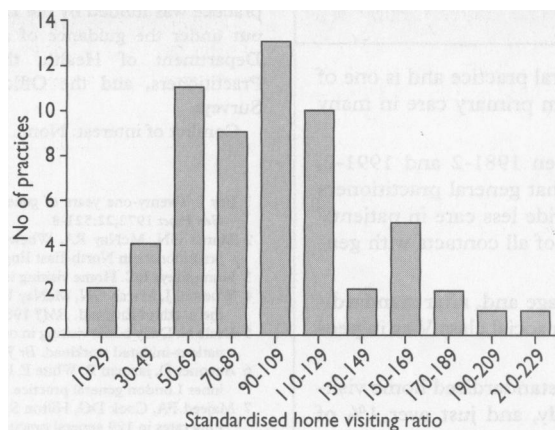


Fig 3—Distribution of age and sex standardised home visiting ratios in 60 practices in fourth national morbidity survey

quartile range 67 to 126), a nearly eightfold variation (fig 3). The practice with the lowest standardised home visiting ratio carried out 100 home visits per general practitioner per year; the practice with the highest ratio carried out 1110 home visits per general practitioner per year. There were strong correlations between the standardised home visiting ratios for the practices and the standardised percentage of patients in each practice visited one to four times ($R = 0.85$, $P < 0.0001$) and visited five or more times ($R = 0.95$, $P < 0.0001$). These findings suggest that practices with high home visiting ratios either had a greater propensity to visit or had patients with an increased demand for home visits, and that the high visiting ratios were not simply the result of the presence of a few high demand patients.

Discussion

Home visiting rates declined by 27% between 1981-2¹¹ and 1991-2,⁸ from 411/1000 patient years to 299/1000, even though the number of people aged 65 and over (who have the greatest demand for home visits) in England and Wales increased by about 7% during the same period.¹² Moreover, a smaller percentage of contacts with a doctor were home visits in the 1991-2 study than in 1981-2 study (10% *v* 12%). These findings suggest that the long term decrease in home visiting rates continued in the 1980s and that general practitioners are altering the way in which they provide care to reduce the amount of time they spend carrying out home visits. However, the overall decline in home visiting rates masks an increase in rates of visits made out of normal working hours, which have increased substantially over the past 30 years.^{13 14} Because the national morbidity survey did not separate visits made during normal working hours from those made out of hours, we were not able to examine factors associated with out of hours visits. A national survey of family health services authorities found that the average night visiting rate for England and Wales was 35/1000 patients,¹⁵ which suggests that nearly one in nine home visits are carried out at night. If the new out of hours primary care centres that are currently being developed reduce the demand for out of hours visits, this will lead to a further fall in home visiting rates.

Our study provides an interesting insight into home visiting by general practitioners, an area that is still an important aspect of general practice in the United Kingdom. The highest home visiting rates were seen in elderly people. Some of the visits to elderly patients will have arisen from the requirement (introduced in the 1990 general practitioner contract) to offer patients aged over 75 years a home visit. Just over 1% of the patients in the morbidity survey accounted for nearly 40% of all home visits. If the high visiting rate in these

patients is the result of a greater need or greater demand for care, then a small increase in the number of such patients in any one practice would lead to a disproportionate increase in the home visiting rate for the practice. Conversely, practices with a below average number of these high demand patients could expect to have below average home visiting rates. However, not all home visits arise from patient demand and some visits will have been initiated by the general practitioner (for example, visits to patients who are chronically ill or to infirm elderly patients).

SOCIAL CLASS AND ETHNIC DIFFERENCES

There was a clear social class gradient in home visiting ratios, with a nearly twofold difference in age and sex standardised home visiting ratios between people in social class I and social class V. Presumably, the high visiting rate in people in social class V is due to a combination of factors: increased morbidity, poorer access to a car, and differing expectations of the services supplied by their general practitioners.¹⁶ The differences in home visiting rates between social classes were much larger than those seen in studies that looked at differences in overall consultation rates between different social classes.¹⁷ There were also large differences in home visiting ratios between ethnic groups, but because patients from ethnic minorities were concentrated in a few practices, differences between ethnic groups are difficult to separate from differences between practices. The finding of large differences between ethnic groups supports calls for more refined measures of ethnicity to be used in health services and epidemiological research.¹⁸ Surprisingly, home visiting ratios were slightly higher in urban areas than in rural areas, but the association between area of residence and home visiting ratios may be confounded by social class.

DIAGNOSES MADE DURING HOME VISITS

The commonest category of diagnosis was "diseases of the respiratory system." This ICD-9 chapter includes diagnoses such as upper respiratory tract infections, pneumonia, asthma, and chronic bronchitis. In older patients "diseases of the circulatory system" was also an important diagnostic category; this ICD-9 chapter includes diagnoses such as ischaemic heart disease and heart failure. In about 11% of home visits, the diagnosis fell into the category of "symptoms, signs, and ill defined conditions," reflecting the diverse nature of the problems seen in general practice and the fact that patients often present to general practitioners with self limiting conditions for which no diagnosis is ever made. There was a smaller spread of diagnoses in children than in other age groups, with the top five diagnostic groups accounting for 86% of diagnoses in children. In patients aged 65 years and over, the top five diagnostic categories accounted for only 58% of the diagnoses (table 2). Children who are visited at home tend to present with acute, self limiting conditions, whereas older patients present with a more diverse range of chronic conditions.

DIFFERENCES AMONG PRACTICES

Even after adjustment for age and sex, there was still a nearly eightfold variation in home visiting ratios among practices. This wide variation among practices, not only in home visiting but also in other areas of practice activity such as night visiting,⁷ cervical smear uptake,¹⁹ and prescribing,²⁰ makes findings from one practice difficult to generalise to other practices. The advantage of large multipractice studies such as the fourth national survey of morbidity in general practice is that they can partially overcome this limitation and provide findings that can be generalised more widely.

Key messages

- Home visiting is an important feature of British general practice and is one of the factors that distinguish primary care in Britain from primary care in many other Western countries
- Annual home visiting rates declined by 27% between 1981-2 and 1991-2, from 411/1000 patient years to 299/1000, suggesting that general practitioners are altering the way in which they provide care to provide less care in patients' homes; however, home visits were responsible for 10% of all contacts with general practitioners
- Home visiting rates showed a J shaped relation with age and, after standardisation for age and sex, were twice as high in people from social class V as in people from social class I
- There was a nearly eightfold variation in age and sex standardised home visiting ratios among the 60 general practices in this study, and just over 1% of patients registered with general practitioners received nearly 40% of all home visits
- Further investigation of both patients and practices with high home visiting rates may help to explain the large differences in workload among general practices and also help in the allocation of resources to practices

Because large, multipractice studies can help us to understand how patient and general practice factors influence the need, demand, and utilisation of health services, they may also help in the development of methods of improving the management and provision of primary care services. Although home visiting rates continue to decline, home visiting remains an important aspect of general practice in the United Kingdom and is an area that would benefit from additional research. Patients who require many home visits may also have a higher demand for drugs and hospital care, and this research may therefore also help in the allocation of budgets for prescribing and fundholding.

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Conflict of interest: None.

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A PATIENT WHO CHANGED MY LIFE

Adult survivors of child sexual abuse

The year was 1988. Pamela—not her real name—had just had her first baby, a beautiful healthy little girl. From being vivacious and happy Pamela became morose and tearful. There was no doubt that she had developed postnatal depression. In the days that followed it became apparent that there were underlying fears and anxieties that I had not uncovered. These centred around mistrust and sexual concerns. For the first time I asked the patient if she had been sexually abused as a child. To my surprise she shared with me her long history, in which her father had abused her sexually over many years. The disclosure was accompanied by expressions of relief.

A few months later, at her request, I was invited to attend a meeting of the Dunfermline Incest Survivor's Project, a group set up by a small core of social workers and survivors. Involvement with teaching over the years had given me a grounding in the analysis of the consultation. A familiarity with the ideas of Balint and Lesser made me confident in my consulting style. Could there be any new areas that were not being addressed? Searching the literature I found that the problem of child sexual abuse was much more common than I had ever realised. The consequences of abuse are reflected in the way that a survivor copes with problems in society. For those most affected, lives are disorganised and unhappy. Signs and

symptoms are similar to those of post-traumatic stress disorder. I learnt that I could expect about 50 of my patients to have been sexually abused as children. How could I have missed this in 21 years of medicine? Who were these adults with disorganised lives? Many immediately came to mind. Over the next few weeks I resolved to ask them during the consultation if they had ever been abused.

The results were astounding. Every week several more patients shared their awful secret with me in the consultation. In most cases this was the first time that they had been able to talk about their abuse. The relief was obvious, and the consultation was strengthened by a new element of trust and understanding. For many patients the heartache seemed to melt away as they found a new responsibility for themselves. Problems in a multitude of guises no longer cluttered the consultation. Since 1988 a small investment in time and counselling has changed my life, my practice, and I hope that of over 70 of my patients.—WILLIE ANGUS is a general practitioner in Rosyth in Fife

We welcome filler articles of up to 600 words on topics such as *A memorable patient*, *A paper that changed my practice*, *My most unfortunate mistake*, or any other piece conveying instruction, pathos, or humour. If possible the article should be supplied on a disk.