

PRACTICE OBSERVED

Practice Research

Projected use in two general practices of services by the elderly at home

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Abstract

The proportion of people aged over 70 years in the community will, it is estimated, rise appreciably over the next 10 to 15 years. The impact, however, on different areas and different services will vary greatly. Using county based population projections this paper estimates the likely future demand by elderly people for home services in two contrasting general practices. To maintain services to meet the present demand, increases ranging from +11% to +55%, depending on the area and the service, will be required.

Introduction

The number of people in Britain has been growing since the middle of the last century owing to a slow but steady decline in the mortality rate. Superimposed on this over the next generation will be a proportionate increase in a cohort of very elderly people who are now between 65 and 75 years of age. This cohort is the product of a decline in the birth rates at the early part of the twentieth century, especially during the 1920s and 1930s.

The use of virtually all health and social services by elderly people increases with age but at different rates for different services. The increased numbers of very elderly people in the future will therefore have varying effects on the need for services. This paper examines the present use of health and social

services and the projected population changes in two general practices, one in Gwent, the other in Powys, to calculate the likely demand for these services in the future.

Method

The study population consisted of 1342 people born in or before 1909, who lived at home and were randomly selected from the age-sex registers of two general practices. Six hundred and fifty nine patients were selected from a practice of four principals covering a wide area in southern Powys. A further 683 patients were taken from a much larger practice of six general practitioners in Gwent.

The two practices were chosen to represent as far as possible typical rural and urban practices. The Powys practice area covers roughly 400 square miles of the Welsh borderlands and consists of several market towns, small villages, and isolated farms. Thus the population is widely dispersed at very low densities. The area is popular with couples who move there from the industrial Midlands on retirement. Eleven per cent of the Powys county population in 1979 were aged over 70, compared with 10% for Wales as a whole. The Gwent practice is on the eastern periphery of the south Wales coalfield. The population is densely concentrated in a highly industrialised urban area. Nine per cent of the population of the county are over 70.

Each member of the study group was visited at home by one of a team of nine fieldworkers and an extensive assessment schedule completed. A questionnaire (available on request) was used to investigate the physical, mental, and social characteristics of the elderly people and was based on previously validated schedules. Response rates were 96% in both areas. Information about the health and social services used was collected at this interview. This included contacts with the general practitioner at home or in the surgery and contacts with domiciliary nurses, chiropody services, home help, and meals on wheels.

County population projections were taken from a Welsh Office publication.¹ These are based on the rates used by the Government Actuary for the total population, then converted to the home population—that is, those actually living in the area. Death rates at the beginning of the projection period were based on recent past experi-

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ence, declining by between 13% and 17% over a 40 year period for those aged over 70. Local factors for each county were included to give higher or lower rates than the Welsh rate based on the averages for 1975-9.

The local government reorganisation of 1974 resulted in migration information being unreliable, particularly in the 1991 figures. Thus the inherent inaccuracies mean that information on the age specific projections could be estimated to the nearest 100 only. This can lead to considerable inaccuracies when, for example, the number of men in Powys aged 85 and over in 1979 is estimated at only 300. The figures can therefore be only a general guide to future numbers of people over 85, particularly in the groups of less than 1000.

The projected population figures were used to calculate the change in demand for services in each practice for each five year age group and for each sex. This was based on the proportion of patients in the practice using the services now in each of these subgroups.

Results

Table I shows the projected changes in numbers of elderly people for Powys and Gwent between 1979 and 1991. Pronounced proportional increases are estimated to occur in those over 80. Thus it is estimated that those aged 85 and over in Powys will increase by 100%, by 1991. The major changes in Gwent will be an increase of 42% for men and 38% for women in the 80-84 year age group.

DEMAND FOR HEALTH SERVICES

Table II shows the proportion of the elderly in different age and sex groups who contacted their general practitioner at home or in the surgery in the month before the interview. In the Powys practice the proportion of elderly people who attended their doctor reaches a peak in the age group 75-79, then falls slightly. The pattern is less clear in Gwent, largely owing to the small numbers of men in the group 85 and over. The estimated increase in the use of general practitioner services is only slightly greater than the projected increase in population of the over 70s in both areas.

Table III shows the estimated number of people who will require a home visit from the general practitioner in 1986 and 1991. The demand for this service normally increases with age so that the likely future demand reflects the increase in the proportion of very elderly people over the next 10 years. This effect is seen particularly in Powys. Thus although the number of over 70s in the practice is expected to increase by 24%, by 1991, the proportion requiring a general practitioner is estimated to be 42% in Powys. This trend is less pronounced in Gwent.

Table IV shows the estimated proportion of elderly people who will require care from a domiciliary nurse. Again this rises with age, so that the estimated demand for this service increases more than for home visits from general practitioners.

There was a projected increase in the proportion of patients over 70 who require a chiropodist in Powys of 22%, in 1986 and 36% in 1991—again much more than the requirement reflected simply from population figures. In Gwent the increase was 11% in 1986 and 17% in 1991. The proportion of people visiting outpatients was not related to age in our study. The projected use of the service was within 1% of the population increase in both areas.

DEMAND FOR SOCIAL SERVICES

Tables V and VI show the projected proportion of elderly people who will require the two main domiciliary social services—home help and meals on wheels. A substantial proportion of people in Powys are estimated to require both services in the next 10 years, and these needs are much higher than the projected population changes suggest. In Gwent the increases are not as great but are still considerable, particularly for home help.

Age (years)/sex	Actual 1979	Projected 1986	Projected 1991
Powys			
70-74	23	25 (+9%)	24 (+4%)
M	2	3 (+50%)	3 (+11%)
F	21	22 (+5%)	21 (+13%)
75-79	13	14 (+8%)	13 (+13%)
M	1	1 (+100%)	1 (+100%)
F	12	13 (+8%)	12 (+13%)
80-84	10	11 (+10%)	10 (+43%)
M	0	0 (+0%)	0 (+0%)
F	10	11 (+10%)	10 (+43%)
85+	3	3 (+0%)	3 (+100%)
M	0	0 (+0%)	0 (+100%)
F	3	3 (+0%)	3 (+100%)
Total	118	136 (+15%)	146 (+24%)
Gwent			
70-74	72	73 (+1%)	73 (+1%)
M	10	9 (-10%)	10 (+2%)
F	62	64 (+3%)	63 (+1%)
75-79	44	46 (+5%)	45 (+13%)
M	4	4 (+0%)	4 (+13%)
F	40	42 (+5%)	41 (+13%)
80-84	19	21 (+11%)	21 (+42%)
M	4	5 (+25%)	5 (+25%)
F	15	16 (+7%)	16 (+42%)
85+	2	2 (+0%)	2 (+0%)
M	1	1 (+0%)	1 (+0%)
F	1	1 (+0%)	1 (+0%)
Total	392	424 (+8%)	440 (+12%)

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TABLE II—Projected demand for all general practitioner contacts per month

Age (years)/sex	Actual 1979	Projected 1986	Projected 1991
Powys			
70-74	38	41.6	39.7
M	32	34.3	32.3
F	6	7.3	7.4
75-79	25	26.7	28.3
M	19	20.4	21.9
F	6	6.3	6.4
80-84	13	13.1	11.9
M	12	12.1	11.1
F	1	1.0	0.8
85+	5	5.3	5.0
M	1	1.0	1.0
F	4	4.3	4.0
Total	204	220.0 (+7.9%)	220.2 (+7.9%)
Gwent			
70-74	37	37.8	37.8
M	46	47.9	49.3
F	34	35.8	35.8
75-79	45	46.4	51.1
M	24	24.8	28.8
F	21	21.6	22.3
80-84	1	1.0	1.2
M	1	1.0	1.2
F	0	0.0	0.0
Total	226	251.9 (+11.3%)	260.7 (+15.5%)

TABLE III—Projected demand for home visits from general practitioners per month

Age (years)/sex	Actual 1979	Projected 1986	Projected 1991
Powys			
70-74	6	6.6	6.3
M	4	4.4	4.1
F	2	2.2	2.2
75-79	4	4.3	4.5
M	1	1.0	1.0
F	3	3.3	3.5
80-84	12	12.1	11.2
M	7	7.0	6.4
F	5	5.1	4.8
85+	2	2.0	2.0
M	1	1.0	1.0
F	1	1.0	1.0
Total	57	57.4 (+0.7%)	56.2 (-2.1%)
Gwent			
70-74	16	16.5	16.5
M	20	19.9	20.6
F	15	15.6	15.9
75-79	17	17.6	19.6
M	8	8.1	9.1
F	9	9.5	10.5
80-84	8	8.1	8.1
M	1	1.0	1.0
F	7	7.1	7.1
85+	1	1.0	1.0
M	1	1.0	1.0
F	0	0.0	0.0
Total	108	117.9 (+9.1%)	127.8 (+18.3%)

will require care from a domiciliary nurse. Again this rises with age, so that the estimated demand for this service increases more than for home visits from general practitioners.

There was a projected increase in the proportion of patients over 70 who require a chiropodist in Powys of 22%, in 1986 and 36% in 1991—again much more than the requirement reflected simply from population figures. In Gwent the increase was 11% in 1986 and 17% in 1991. The proportion of people visiting outpatients was not related to age in our study. The projected use of the service was within 1% of the population increase in both areas.

Discussion

Many variables other than population changes are likely to have an effect on the requirement for services by elderly people over the next 10 years, but the population effects are likely to be the most important. Another demographic characteristic that will have an effect will be the number of pensioners living alone; this has doubled in the past 20 years. This trend is expected to continue over the next 10 years as elderly women continue to outlive their partners and will have an obvious impact on the need for services for the elderly. Daughters are the largest group who care for the elderly in the community. Overall, there has been a reduction in completed family size since the beginning of the century, so that there are simply fewer people to care for elderly relatives.

It cannot be assumed that the age specific morbidity rates in the elderly will remain constant. Thus there is evidence that the incidence of fractured femur has increased over the past 10 years,² though more general measures of disability used in the

TABLE IV—Projected demand for domiciliary nurse per month

Age (years)/sex	Actual 1979	Projected 1986	Projected 1991
Powys			
70-74	3	3.3	3.1
M	1	1.1	1.1
F	2	2.2	2.0
75-79	3	3.3	3.5
M	3	3.3	3.5
F	0	0.0	0.0
80-84	10	10.5	13.9
M	3	3.3	4.0
F	7	7.2	9.9
85+	12	12.9	16.0
M	3	3.3	4.0
F	9	9.6	12.0
Total	42	50.2 (+19.0%)	60.5 (+43.8%)
Gwent			
70-74	5	5.1	5.1
M	5	5.1	5.1
F	0	0.0	0.0
75-79	5	5.5	5.8
M	5	5.5	5.8
F	0	0.0	0.0
80-84	8	8.8	9.0
M	4	4.4	4.5
F	4	4.4	4.5
85+	12	12.9	16.0
M	3	3.3	4.0
F	9	9.6	12.0
Total	55	62.9 (+14.4%)	76.2 (+20.8%)

TABLE V—Use of home help

Age (years)/sex	Actual 1979	Projected 1986	Projected 1991
Powys			
70-74	0	0.0	0.0
M	0	0.0	0.0
F	0	0.0	0.0
75-79	1	1.1	1.1
M	1	1.1	1.1
F	0	0.0	0.0
80-84	2	2.2	2.9
M	2	2.2	2.9
F	0	0.0	0.0
85+	10	10.5	13.9
M	3	3.3	4.0
F	7	7.2	9.9
Total	13	15.8 (+21.5%)	20.9 (+54.6%)
Gwent			
70-74	1	1.0	1.0
M	1	1.0	1.0
F	0	0.0	0.0
75-79	3	3.3	3.5
M	3	3.3	3.5
F	0	0.0	0.0
80-84	6	6.6	6.8
M	3	3.3	3.5
F	3	3.3	3.3
85+	12	12.9	16.0
M	6	6.6	8.0
F	6	6.3	8.0
Total	42	47.7 (+14.5%)	51.7 (+23.2%)

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Comparison of prescription costs within a group practice

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Abstract

Records of prescriptions that originated from one group practice and were dispensed at one pharmacy were maintained for one year. The information recorded included the age and sex of the patients, the name of the prescribing doctor, and the drug(s) prescribed and their cost.

Analysis of the records showed considerable differences in average prescription costs among doctors. For all the major therapeutic groups, repeat prescriptions were more expensive than new prescriptions, children had cheaper prescription costs than adults, and prescriptions for women were cheaper than those for men. Within an age-sex group or a therapeutic group, however, prescription costs were similar for each doctor. These results indicate that the differences in overall prescribing costs among doctors were not due to different management of the same disorders, but were due to different types of patients being seen.

Introduction

One aspect of clinical freedom is the right to prescribe whatever drug a doctor considers to be appropriate for the treatment of the patient. Though respecting this clinical freedom, the Department of Health and Social Security monitors the prescribing costs of individual doctors, with the result that some doctors are labelled as "high cost prescribers." Little research has been done to determine why some doctors are "high cost" prescribers, although it has been reported that they tended to be foreign trained and to practise in small partnerships. There are few details, however, on the cost of prescriptions and why prescribing costs may vary among doctors.

In one group practice five doctors one partner was consistently found by the DHSS to be the highest cost prescriber, and one of the others was always the lowest cost prescriber. No obvious differences in the prescribing patterns of the doctors in the practice were apparent. To investigate objectively the differences in prescribing patterns and, ultimately, prescribing costs among the doctors we decided to record all the prescriptions written by the five doctors, with the help of our local pharmacist, who kept records of all the prescriptions he dispensed from the practice.

Method

All prescriptions issued by the four partners and one trainee in a group practice in South Manchester and dispensed at one local pharmacy over one year were recorded by the pharmacist. The practice

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TABLE VI—Use of meals on wheels

Age (years)/sex	Actual 1979	Projected 1986	Projected 1991
Powys			
70-74	8	8.7	8.4
M	7	7.0	6.7
F	1	1.7	1.7
75-79	2	2.1	2.3
M	2	2.1	2.3
F	0	0.0	0.0
80-84	4	4.9	5.1
M	7	7.0	6.6
F	0	0.0	0.0
85+	5	5.3	5.0
M	0	0.0	0.0
F	5	5.3	5.0
Total	43	54.3 (+26.3%)	61.1 (+42.1%)
Gwent			
70-74	3	3.0	3.0
M	3	3.0	3.0
F	0	0.0	0.0
75-79	1	1.1	1.1
M	1	1.1	1.1
F	0	0.0	0.0
80-84	3	3.3	3.3
M	3	3.3	3.3
F	0	0.0	0.0
85+	1	1.0	1.0
M	1	1.0	1.0
F	0	0.0	0.0
Total	17	18.2 (+7.1%)	18.9 (+17.1%)

General Household Survey have not supported an overall increase in morbidity.³

Our preliminary study has given a measure of the order of magnitude of the likely change in demand over the next 10 years using population data only. The variables mentioned which may be expected to have an effect on the future need for services—living alone, family carers, changes in morbidity—all seem now to be likely to increase the need for services over and above the population changes, so that these figures will be an underestimate of the future demand.

Different services and areas will be affected to different degrees by the increasing number of elderly people. Some areas may be affected by the demographic changes later than others. Thus projections beyond 1991 suggest that Gwent will be affected similarly to Powys some 10 years later. The overall population changes will be such that careful preparation and planning of services will be required even in those areas that will not be heavily affected.

There is no evidence that such planning is now occurring. The availability of some primary care services is increasing but this is not true of all such services. Thus over the past five years in Wales there has been a decline of 14% in the visits made by health visitors and of 17% in meals on wheels to the elderly and an increase of 12% for home nurses, 16% for home help, and 20% for chiropody services. Such increases may be adequate for some areas but not for all, particularly if the provision for residential care remains static, as it has done for some years.

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Comparison of prescription costs within a group practice

Abstract

was situated on a large housing estate, within a short distance of the pharmacy. The information recorded from the prescriptions included the patient's name, address, age and sex, the name of the prescribing doctor, and the drug(s) prescribed. The cost of the items on each prescription was calculated and recorded. During the year the pharmacist used his professional knowledge and patient contact to determine whether a prescription was a new one or a repeat of a previous treatment. Thus at the end of the year it was possible to determine from the prescription records how many prescriptions were dispensed and roughly estimate the distribution of new and repeat prescriptions.

Prescriptions were classified according to the age of the patient: under 16 years old, 16-64, and 65 and over. Because National Health Service prescriptions are suitably endorsed it is relatively simple to identify which prescriptions were issued for patients under 16 and for men 65 and over. Because of the different retirement ages for men and