

PRACTICE OBSERVED

Practice Research

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

NORMAN J VETTER, DEE A JONES, CHRISTINA R VICTOR

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. This 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 helps, 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-

Research Team for the Care of the Elderly, University of Wales College of Medicine, Cardiff.
NORMAN J VETTER, MD, MRCM, director
DEE A JONES, PhD, senior research officer
CHRISTINA R VICTOR, PhD, research officer

1194

ence, declining by between 13% and 17% over a 40 year period for those aged 70. Local factors for each county were included to give higher or lower rates than the Welsh rate based on the averages for 1979-9.

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 26% 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 age 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.

TABLE I—Projected population changes for Powys and Gwent by age and sex 1979-91 (1000s)

Age (years)/sex	Actual 1979	Projected (%) increase	1986	1991
Powys				
70-74	23	25 (+9)	24 (+4)	24 (+4)
M	2	30 (+7)	31 (+11)	31 (+11)
F	21	24 (+9)	27 (+13)	27 (+13)
75-79	15	24 (+62)	37 (+148)	37 (+148)
M	1	14 (+13)	15 (+13)	15 (+13)
F	14	24 (+71)	32 (+128)	32 (+128)
80-84	07	04 (+29)	10 (+43)	10 (+43)
M	1	14 (+13)	15 (+13)	15 (+13)
F	6	04 (+29)	8 (+33)	8 (+33)
85+	03	05 (+67)	04 (+100)	04 (+100)
M	07	11 (+57)	14 (+100)	14 (+100)
F	07	11 (+57)	14 (+100)	14 (+100)
Total	118	136 (+15)	146 (+24)	146 (+24)
Gwent				
70-74	72	73 (+1)	73 (+1)	73 (+1)
M	10	9 (-1)	10 (+2)	10 (+2)
F	62	74 (+19)	73 (+17)	73 (+17)
75-79	44	48 (+9)	49 (+11)	49 (+11)
M	1	14 (+13)	15 (+13)	15 (+13)
F	43	47 (+11)	48 (+11)	48 (+11)
80-84	19	24 (+26)	27 (+42)	27 (+42)
M	4	51 (+19)	55 (+28)	55 (+28)
F	15	24 (+61)	32 (+112)	32 (+112)
85+	14	14 (+0)	14 (+0)	14 (+0)
M	1	14 (+13)	15 (+13)	15 (+13)
F	13	14 (+10)	14 (+10)	14 (+10)
Total	392	424 (+10)	440 (+12)	440 (+12)

BRITISH MEDICAL JOURNAL VOLUME 289 3 NOVEMBER 1984

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

Age (years)/sex	Contacted general practitioners 1979		Projected demand	
	No.	%	1986	1991
Powys				
70-74	38	31	41.6	39.7
M	32	27	34.3	35.4
F	6	5	7.3	4.3
75-79	25	31	28.7	28.3
M	1	1	1.0	0.9
F	24	30	27.7	27.4
80-84	13	29	17.1	16.0
M	2	2	2.0	2.0
F	11	27	15.1	14.0
85+	5	23	4.3	30.5
M	18	28	29.3	36.0
F	13	31	14.0	14.5
Total	204	32	230.0 (+17%)	259.2 (+27%)
Gwent				
70-74	37	32	37.8	37.8
M	6	5	6.0	6.0
F	31	27	31.8	31.8
75-79	36	40	37.5	38.6
M	4	4	4.0	4.0
F	32	36	33.5	34.6
80-84	40	34	51.8	51.8
M	24	30	28.8	28.8
F	16	14	23.0	23.0
85+	1	10	1.0	1.2
M	18	28	18.0	24.2
F	17	17	17.0	17.0
Total	226	35	251.9 (+11%)	267.7 (+15%)

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

Age (years)/sex	Actual visits		Projected demand	
	No.	%	1986	1991
Powys				
70-74	6	5	6.6	6.3
M	4	4	4.4	4.3
F	2	2	2.2	2.0
75-79	5	7	5.3	5.7
M	1	1	1.0	1.0
F	4	6	4.3	4.7
80-84	12	10	13.1	14.2
M	7	16	9.2	10.2
F	5	10	6.9	4.0
85+	2	9	3.3	4.0
M	11	17	13.3	22.0
F	1	9	1.0	2.0
Total	57	9	71.4 (+25%)	80.8 (+42%)
Gwent				
70-74	16	14	16.5	16.5
M	20	14	19.9	20.6
F	16	16	16.6	16.6
75-79	10	15	10.6	10.6
M	8	24	11.3	11.7
F	2	10	2.3	2.9
80-84	8	24	11.3	11.7
M	1	10	1.0	1.2
F	7	14	7.3	10.5
85+	1	10	1.0	1.2
M	13	17	18.8	21.5
F	1	3	1.0	1.0
Total	108	17	121.9 (+13%)	127.8 (+18%)

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

Age (years)/sex	Actual visits		Projected demand	
	No.	%	1986	1991
Powys				
70-74	6	5	6.6	6.3
M	4	4	4.4	4.3
F	2	2	2.2	2.0
75-79	5	7	5.3	5.7
M	1	1	1.0	1.0
F	4	6	4.3	4.7
80-84	12	10	13.1	14.2
M	7	16	9.2	10.2
F	5	10	6.9	4.0
85+	2	9	3.3	4.0
M	11	17	13.3	22.0
F	1	9	1.0	2.0
Total	57	9	71.4 (+25%)	80.8 (+42%)
Gwent				
70-74	16	14	16.5	16.5
M	20	14	19.9	20.6
F	16	16	16.6	16.6
75-79	10	15	10.6	10.6
M	8	24	11.3	11.7
F	2	10	2.3	2.9
80-84	8	24	11.3	11.7
M	1	10	1.0	1.2
F	7	14	7.3	10.5
85+	1	10	1.0	1.2
M	13	17	18.8	21.5
F	1	3	1.0	1.0
Total	108	17	121.9 (+13%)	127.8 (+18%)

TABLE V—Projected proportion of elderly people who will require the two main domiciliary social services—home helps 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 helps.

PRACTICE OBSERVED

Practice Research

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

NORMAN J VETTER, DEE A JONES, CHRISTINA R VICTOR

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. This 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 helps, 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-

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 age 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.

TABLE I—Projected population changes for Powys and Gwent by age and sex 1979-91 (1000s)

Age (years)/sex	Actual 1979	Projected (%) increase	1986	1991
Powys				
70-74	23	25 (+9)	24 (+4)	24 (+4)
M	2	30 (+7)	31 (+11)	31 (+11)
F	21	24 (+9)	27 (+13)	27 (+13)
75-79	15	24 (+62)	37 (+148)	37 (+148)
M	1	14 (+13)	15 (+13)	15 (+13)
F	14	24 (+71)	32 (+128)	32 (+128)
80-84	07	04 (+29)	10 (+43)	10 (+43)
M	1	14 (+13)	15 (+13)	15 (+13)
F	6	04 (+29)	8 (+33)	8 (+33)
85+	03	05 (+67)	04 (+100)	04 (+100)
M	07	11 (+57)	14 (+100)	14 (+100)
F	07	11 (+57)	14 (+100)	14 (+100)
Total	118	136 (+15)	146 (+24)	146 (+24)
Gwent				
70-74	72	73 (+1)	73 (+1)	73 (+1)
M	10	9 (-1)	10 (+2)	10 (+2)
F	62	74 (+19)	73 (+17)	73 (+17)
75-79	44	48 (+9)	49 (+11)	49 (+11)
M	1	14 (+13)	15 (+13)	15 (+13)
F	43	47 (+11)	48 (+11)	48 (+11)
80-84	19	24 (+26)	27 (+42)	27 (+42)
M	4			

